

**KSD362**

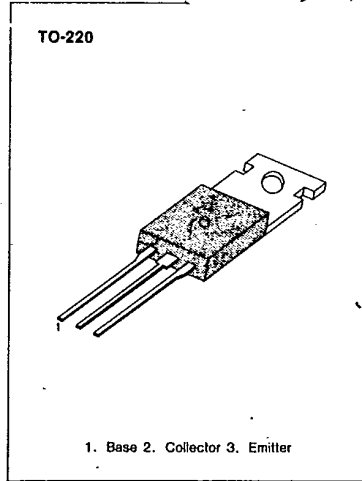
**NPN EPITAXIAL SILICON TRANSISTOR**

**B/W TV HORIZONTAL DEFLECTION OUTPUT**

- Collector-Base Voltage  $V_{CBO} = 150V$
- Collector Current  $I_C = 5A$
- Collector Dissipation  $P_C = 40W$  ( $T_C = 25^\circ C$ )

**ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ C$ )**

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	150	V
Collector-Emitter Voltage	$V_{CEO}$	70	V
Emitter-Base Voltage	$V_{EBO}$	8	V
Collector Current	$I_C$	5	A
Collector Dissipation ( $T_C = 25^\circ C$ )	$P_C$	40	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature	$T_{stg}$	-55 ~ +150	$^\circ C$



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**ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )**

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C = 1mA, I_E = 0$	150			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C = 20mA, R_{BE} = \infty$	70			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E = 1mA, I_C = 0$	8			V
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 100V, I_E = 0$			20	$\mu A$
DC Current Gain	$h_{FE}$	$V_{CE} = 5V, I_C = 5A$	20		140	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 5A, I_B = 0.5A$			1	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 5A, I_B = 0.5A$			1.5	V
Current Gain Bandwidth Product	$f_T$	$V_{CE} = 5V, I_C = 0.5A$		10		MHz

**$h_{FE}$  CLASSIFICATION**

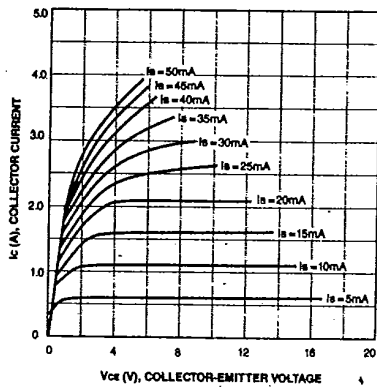
Classification	N	R	O
$h_{FE}$	20-50	40-80	70-140

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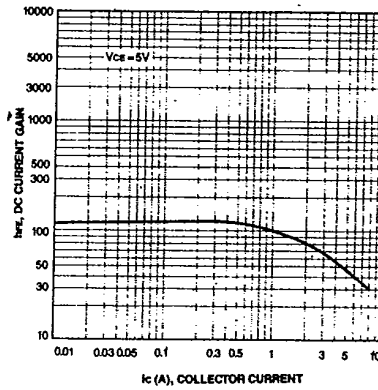
NPN EPITAXIAL SILICON TRANSISTOR

T-33-11

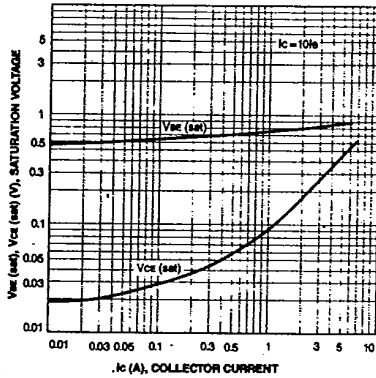
STATIC CHARACTERISTIC



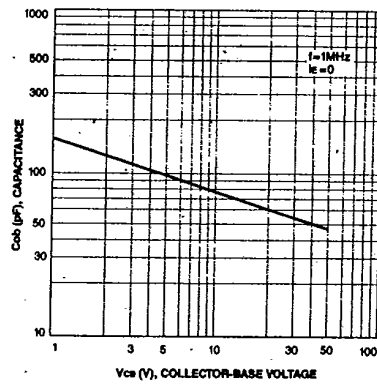
DC CURRENT GAIN



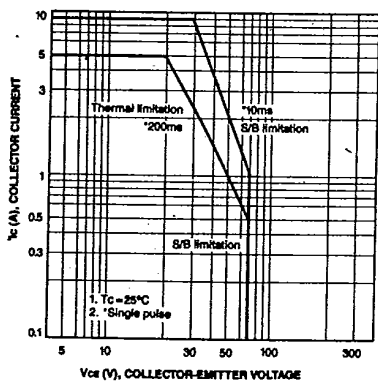
BASE-EMITTER SATURATION VOLTAGE  
COLLECTOR-EMITTER SATURATION VOLTAGE



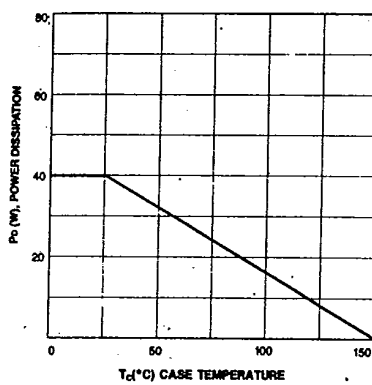
COLLECTOR OUTPUT CAPACITANCE



SAFE OPERATING AREA



POWER DERATING

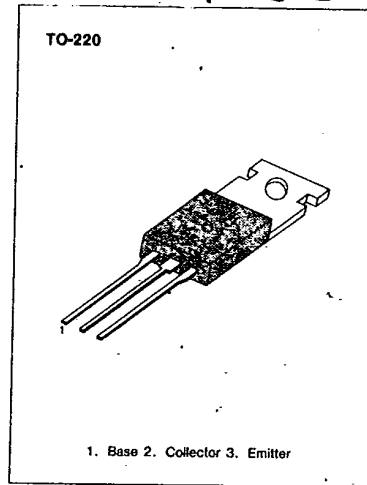


**KSD363****NPN EPITAXIAL SILICON TRANSISTOR****B/W TV HORIZONTAL DEFLECTION OUTPUT**

- Collector-Base Voltage  $V_{CB0}=300V$
- Collector Current  $I_C=6A$
- Collector Dissipation  $P_C=40W$  ( $T_C=25^\circ C$ )

**ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ C$ )**

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	300	V
Collector-Emitter Voltage	$V_{CE0}$	120	V
Emitter-Base Voltage	$V_{EB0}$	8	V
Collector Current	$I_C$	6	A
Collector Dissipation ( $T_C=25^\circ C$ )	$P_C$	40	W
Junction Temperature	$T_J$	150	$^\circ C$
Storage Temperature	$T_{stg}$	$-55 \sim +150$	$^\circ C$



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**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )**

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	$BV_{CB0}$	$I_C=1mA, I_E=0$	300			V
Collector-Emitter Breakdown Voltage	$BV_{CE0}$	$I_C=20mA, I_B=0$	120			V
Emitter-Base Breakdown Voltage	$BV_{EB0}$	$I_E=-1mA, I_C=0$	8			V
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=250V, I_E=0$			1	mA
DC Current Gain	$h_{FE}$	$V_{CE}=5V, I_C=1A$	40		240	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1A, I_B=0.1A$			1	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=1A, I_B=0.1A$			1.5	V
Current Gain-Band width Product	$f_T$	$V_{CE}=5V, I_C=0.5A$		10		MHz

 **$h_{FE}$  CLASSIFICATION**

Classification	R	O	Y
$h_{FE}$	40-80	70-140	120-240

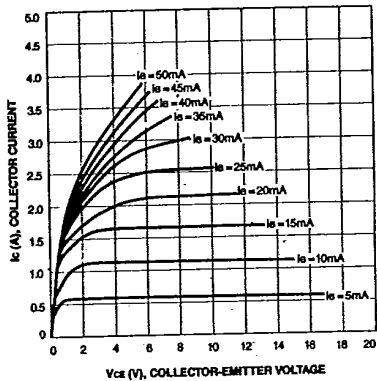


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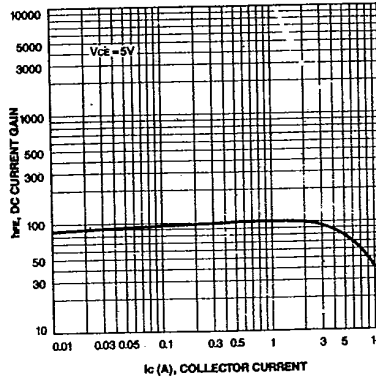
NPN EPITAXIAL SILICON TRANSISTOR

T-33-11

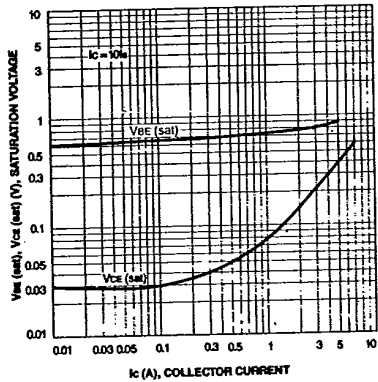
STATIC CHARACTERISTIC



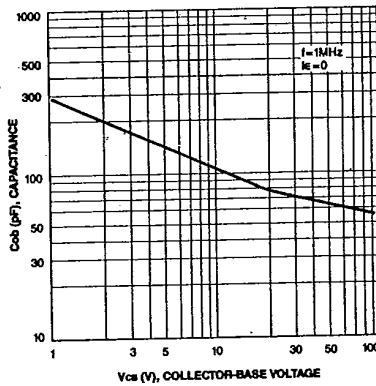
DC CURRENT GAIN



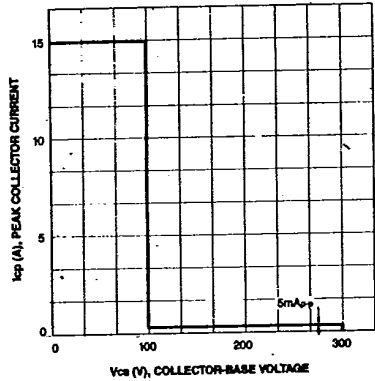
BASE-EMITTER SATURATION VOLTAGE  
COLLECTOR-EMITTER SATURATION VOLTAGE



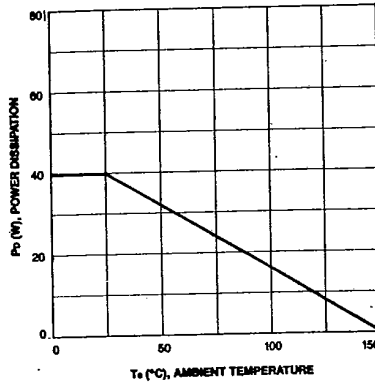
COLLECTOR OUTPUT CAPACITANCE



SAFE OPERATING AREA  
(On HORIZONTAL DEFLECTION OUTPUT CIRCUIT)



POWER DERATING



**KSD526****NPN EPITAXIAL SILICON TRANSISTOR**

T-33-09

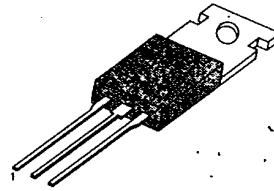
**POWER AMPLIFIER APPLICATIONS**

• Complement to KSB596

**ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C)**

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V <sub>CB0</sub>	80	V
Collector-Emitter Voltage	V <sub>CE0</sub>	80	V
Emitter-Base Voltage	V <sub>EB0</sub>	5	V
Collector Current	I <sub>c</sub>	4	A
Base Current	I <sub>b</sub>	0.4	A
Collector Dissipation (T <sub>c</sub> =25°C)	P <sub>c</sub>	30	W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55~150	°C

TO-220



1. Base 2. Collector 3. Emitter

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**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C)**

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> =80V, I <sub>E</sub> =0			30	μA
Emitter Cutoff Current	I <sub>EB0</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0			100	μA
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	I <sub>C</sub> =50mA, I <sub>B</sub> =0	80			V
Emitter Base Breakdown Voltage	BV <sub>EB0</sub>	I <sub>E</sub> =10mA, I <sub>C</sub> =0	5			V
DC Current Gain	h <sub>FE1</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =0.5A	40		240	
	h <sub>FE2</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =3A	15	50		
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =3A, I <sub>B</sub> =0.3A		0.45	1.5	V
Base Emitter On Voltage	V <sub>BE(on)</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =3A		1	1.5	V
Current Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =0.5A	3	8		MHz
Collector Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz		90		pF

**h<sub>FE</sub>(1) CLASSIFICATION**

Classification	R	O	Y
h <sub>FE</sub> (1)	40-80	70-140	120-240

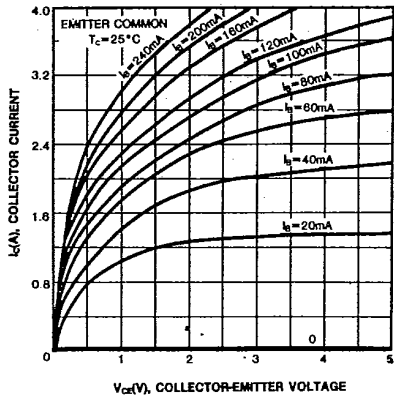


KSD526

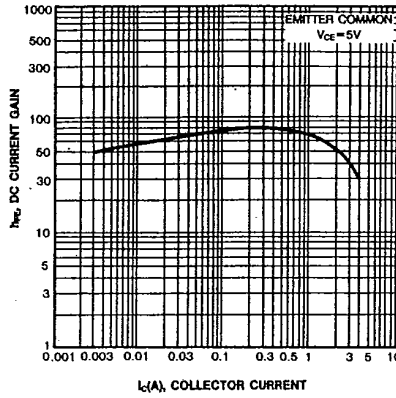
NPN EPITAXIAL SILICON TRANSISTOR

T-33-09

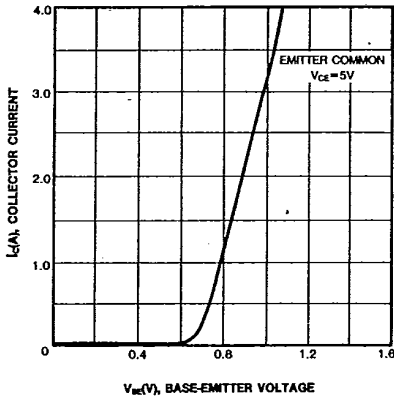
STATIC CHARACTERISTIC



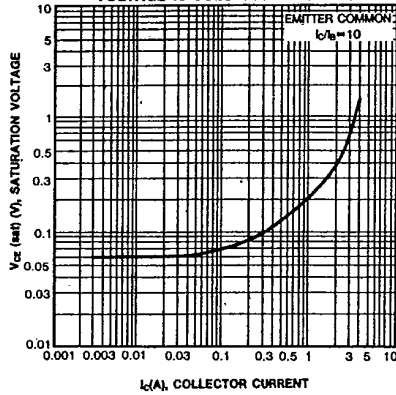
DC CURRENT GAIN



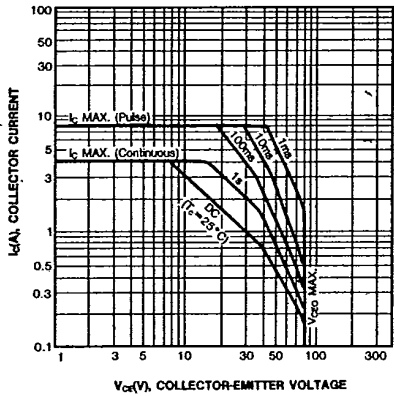
BASE-EMITTER ON VOLTAGE



COLLECTOR-EMITTER SATURATION VOLTAGE vs COLLECTOR CURRENT



SAFE OPERATING AREA



POWER DERATING

