

2N6436 2N6437 2N6438

MECHANICAL DATA

Dimensions in mm (inches)

(1)

TO-3 Package (TO-204AA)

3.84 (0.151) 4.09 (0.161)

Pin 1 - Base Pin 2 - Emitter Case - Collector

HIGH POWER PNP SILICON TRANSISTORS

DESCRIPTION

Designed for use in Industrial - Military Power Amplifier and Switching Circuit **Applications**

ABSOLUTE MAXIMUM RATINGS(T _{CASE} = 25°c unless otherwise stated)		2N6436	2N6437	2N6438	
$\overline{V_{CB}}$	Collector – Base Voltage	100	120	140	
V_{CEO}	Collector – Emitter Voltage	80 100 120			
V_{EB}	Emitter – Base Voltage	6.0V			
I _C	Collector Current Continuous	25A			
Peak		50A			
I _B	Base Current	10A			
P_{D}	Total Device Dissipation at T _{case} = 25°C	140W			
	Derate above 25°C		0.8W/°C		
$T_{stg,}T_{j}$	Operating and Storage Temperature Range	−65 to +200°C			

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Document Number 3252

Issue 3



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THERMAL DATA

R _{thj-case}	Thermal Resistance Junction-case	Max	1.25	°C/W
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ELECTRICAL CHARACTERISTICS FOR $(T_{case} = 25^{\circ}C)$ unless otherwise stated)

	Parameter	Test Conditions	Min.	Тур.	Max.	Unit	
I _{CBO}	Collector Cut Off Current	V _{CB} = 100V I _E = 0 2N6436			10	μΑ	
		V _{CB} = 120V I _E = 0 2N6437			10		
		V _{CB} = 140V I _E = 0 2N6438			10		
I _{EBO}	Emitter Cut Off Current	$V_{EB} = 6V$ $I_C = 0$			100	μΑ	
I _{CEX}	Collector Cut Off Current	V _{CE} = 90V 2N6436			10	μΑ	
		$V_{BE (off)} = -1.5V T_{C} = 150^{\circ}C$			1.0	mA	
		V _{CE} = 110V 2N6437			10	μΑ	
		$V_{BE (off)} = -1.5V T_{C} = 150^{\circ}C$			1.0	mA	
		V _{CE} = 130V 2N6436			10	μΑ	
		$V_{BE (off)} = -1.5V T_{C} = 150^{\circ}C$			1.0	mA	
		$V_{CE} = 40V I_B = 0$ 2N6436			50		
I_{CEO}	Collector Cut off Current	$V_{CE} = 50V I_B = 0$ 2N6437			50	μΑ	
		$V_{CE} = 60V I_B = 0.$ 2N6438			50	1	
	Collector Emitter Breakdown Voltage	2N6436	80				
V _{(BR)CEO} *		$I_C = 50 \text{mA}$ $I_B = 0$ 2N6437	100	100		V	
		2N6438	120				
h _{FE*}	DC Current Gain	V _{CE} =2.0V I _C = 0.5A	30			_	
		V _{CE} = 2.0V I _C = 10A	20		120		
		$V_{CE} = 2.0V$ $I_{C} = 25A$	12				
V _{CE(sat)} *	Collector - Emitter Saturation Voltage	I _C = 10A I _B = 1.0A			1.0	V	
		$I_C = 25A$ $I_B = 2.5A$			1.8		
V _{BE(sat)} *	Base Emitter Saturation Voltage	$I_C = 10A$ $I_B = 1.0AV$			1.8		
		$I_C = 25A$ $I_B = 2.5A$			2.5		
f _T	Current Gain - Bandwidth Product	$I_C = 1.0A$ $V_{CE} = 10V$	40		MHz		
		f _{test} = 10MHz	40			1911 12	
C _{ob}	Output Capacitance	$I_E = 0A$ $V_{CE} = 10V$			700	pF	
		f = 100kHz		/00	"		
t _r	Rise Time	V _{CC} = 80V I _C = 10A			0.3		
		$V_{BE(off)} = 6.0V I_{B1} = 1.0A$			0.5	μs	
t _s	Storage	V _{CC} = 80V I _C = 10A			1.0	μο	
t _f	Fall Time	$V_{BE(off)} = 6.0V I_{B1} = I_{B2} = 1.0A$			0.25		

^{*} Pulse test: Pulse Width $\leq 300 \mu s$, Duty Cycle $\leq 2.0\%$

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