

2N3133 — 2N3134

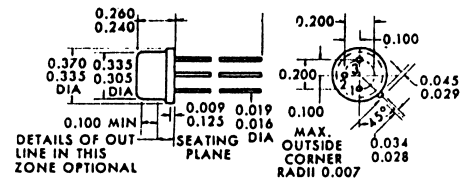
PNP Silicon
 Epitaxial Transistors

APPLICATIONS

These transistors are designed for use as small signal and medium power amplifiers as well as high speed, high current switching applications.

MECHANICAL OUTLINE

TO-5 Collector in contact with case.



MAXIMUM RATINGS

Total Device Dissipation	600 mW
Storage Temperature	-65°C to +200°C
Collector Current	600 mA

DESIGN CHARACTERISTICS AT 25°C (Except as Noted)

SYMBOL	PARAMETER	TEST CONDITIONS	MIN.	MAX.	UNITS
BVCBO	Collector-Base Breakdown Voltage	$I_C = 10\mu A, I_E = 0$	-50		V
BVCEO	Collector-Emitter Breakdown Voltage	$I_C = 10mA, I_B = 0$	-35		V
BVEBO	Emitter-Base Breakdown Voltage	$I_E = 10\mu A, I_C = 0$	-4		V
ICBO	Collector Cut-off Current	$V_{CB} = -30V, I_E = 0, T_A = 25^\circ C$ $T_A = 150^\circ C$	-	50	nA
ICEX	Collector Reverse Current	$V_{CE} = -30V, V_{EB} = .5V$	-	0.1	μA
hFE	D.C. Forward Current Transfer Ratio	$V_{CE} = -10V, I_C = 1mA$	-	-	-
		2N3133	25	-	-
		2N3134	50	-	-
		* $I_C = 150mA$ 2N3133	40	120	-
		2N3134	100	300	-
		* $V_{CE} = 1.0V, I_C = 150mA$ 2N3133	10	-	-
		2N3134	25	-	-
*VCE(sat)	Collector Saturation Voltage	$I_C = 150mA, I_B = 15mA$	-	-0.6	V
*VBE(sat)	Base Saturation Voltage	$I_C = 150mA, I_B = 15mA$	-	-1.5	V
hfe	A.C. Forward Current Transfer Ratio	$V_{CE} = -20V, I_C = 50mA, f = 100mc$	2.0	-	-
Cob	Collector Capacitance	$V_{CB} = -10V, I_E = 0, f = 100kc$	-	10	pf
Cib	Input Capacitance	$V_{BE} = -2V, I_C = 0, f = 100kc$	-	40	pf
tON	Turn-on Time	$V_{CC} = -30V, I_{CS} = 150mA, I_{B1} = 15mA$	-	75	nsec
tOFF	Turn-off Time	$V_{CC} = -6V, I_{CS} = 150mA$ $I_{B1} = -I_{B2} = 15mA$	-	-	-
			-	150	nsec

* Pulse Test: Pulse width \leq 300 nsec, duty cycle 2%

