2 6284 (P) 2 6286, 2 6287 (P P) Preferred Device

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These packages are designed for general purpose amplifier and low frequency switching applications.

Features

- High DC Current Gain @ I_C = 10 Adc h_{FE} = 2400 (Typ) 2N6284 = 4000 (Typ) 2N6287
- Collector Emitter Sustaining Voltage V_{CEO(sus)} = 100 V dc (Min)
- Monolithic Construction with Built In Base Emitter Shunt Resistors
- Pb Free Packages are Available*

MAXIMUM RATINGS (Note 1)

Rating	Symbol	Symbol Value					
Collector Emitter Voltage 2N6286 2N6284/87	V _{CEO}	80 100	Vdc				
Collector Base Voltage 2N6286 2N6284/87	V _{CB}	V _{CB} 80 100					
Emitter Base Voltage	V_{EB}	5.0	Vdc				
Collector Current Continuous Peak	Ι _C	I _C 20 40					
Base Current	Ι _Β	l _B 0.5					
Total Power Dissipation @ $T_C = 25^{\circ}C$ Derate above 25°C	PD	160 0.915	W W/°C				
Operating and Storage Temperature Range	T _J , T _{stg}	°C					

THERMAL CHARACTERISTICS (Note 1)

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.09	

2N6284 (NPN); 2N6286, 2N6287 (PNP)

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ACTIVE-REGION SAFE OPERATING AREA



Figure 5. 2N6284, 2N6287

There are two limitations on the power handling ability of a transistor: average junction temperature and second breakdown. Safe operating area curves indicate $I_C = V_{CE}$ limits of the transistor that must be observed for reliable operation; i.e. the transistor must not be subjected to greater dissipation than the curves indicate.

The data of Figure 5 is based on $T_{J(pk)} = 200^{\circ}$ C; T_{C} is variable depending on conditions. Second breakdown pulse limits are valid for duty cycles to 10% provided $T_{J(pk)} < 200^{\circ}$ C. $T_{J(pk)}$ may be calculated from the data in Figure 4. At high case temperatures, thermal limitations will reduce the power that can be handled to values less than the limitations imposed by second breakdown.



Figure 6. Small-Signal Current Gain



2N6284 (NPN); 2N6286, 2N6287 (PNP)



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I_C, COLLECTOR CURRENT (AMP)





Figure 11. Temperature Coefficients





CASE 1-07

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SCALE 1:1

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