New Jersey Semi-Conductor Products, Inc.

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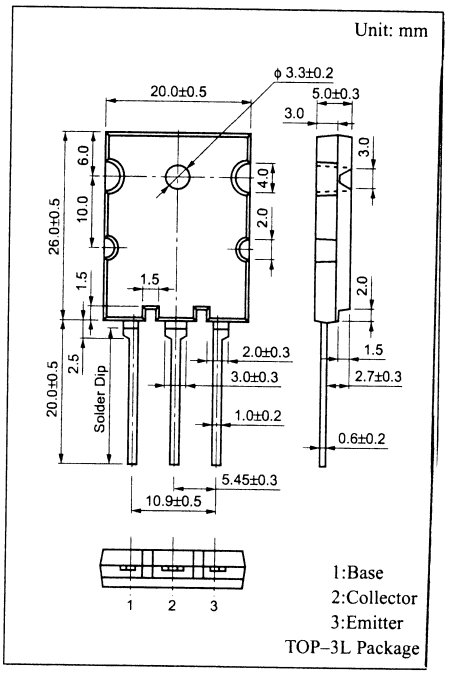
2SD2029

Silicon NPN triple diffusion planar type

For high power amplification
Complementary to 2SB1347



Features

- Satisfactory foward current transfer ratio h_{FE} collector current I_C characteristics
- Wide area of safe operation (ASO)
- High transition frequency f_T
- Optimum for the output stage of a HiFi audio amplifier

Absolute Maximum Ratings (T_C=25°C)

Parameter		Symbol	Ratings	Unit
Collector to base voltage		V_{CBO}	160	V
Collector to emitter voltage		V_{CEO}	160	V
Emitter to base voltage		V_{EBO}	5	V
Peak collector current		I_{CP}	20	A
Collector current		I_C	12	A
Collector power dissipation	T_C=25°C	P_C	120	W
	Ta=25°C		3.5	
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	−55 to +155	°C

Electrical Characteristics (T_C=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 160V, I_E = 0			50	μA
Emitter cutoff current	I_{EBO}	V_{EB} = 3V, I_C = 0			50	μA
Forward current transfer ratio	h_{FE1}	V_{CE} = 5V, I_C = 20mA	20			
	h_{FE2}*	V_{CE} = 5V, I_C = 1A	60		200	
	h_{FE3}	V_{CE} = 5V, I_C = 8A	20			
Base to emitter voltage	V_{BE}	V_{CE} = 5V, I_C = 8A			1.8	V
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 8A, I_B = 0.8A			2.0	V
Transition frequency	f_T	V_{CE} = 5V, I_C = 0.5A, f = 1MHz		20		MHz
Collector output capacitance	C_{ob}	V_{CB} = 10V, I_E = 0, f = 1MHz		210		pF

*h_{FE2} Rank classification

Rank	Q	S	P
h_{FE2}	60 to 120	80 to 160	100 to 200

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