SILICON PLASTIC POWER TRANSISTOR
NPN 2SD313
3A 30W

Technical Data

…designed for Low Frequency Power Amplifier.

- ☞ Collector-Emitter Voltage: V_{CEO}=60V
- ☞ DC Current Gain: 40 @ I_C=2A
- ☞ TO-220 Package

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector- Emitter Voltage	V_{CEO}	60	Vdc
Collector – Base Voltage	V_{CB}	60	Vdc
Emitter Base Voltage	V_{EB}	5	Vdc
Collector Current – Continuos	I_C	3	Adc
Base Current	I_B	0.3	Adc
Total Power Dissipation @ TC = 25°C Derate above 25°C	PD	30 0.24	Watts W/°C
Operating and Storage junction Temperature Range	Tj,Tstg	-55 to +150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max.	Unit
Thermal resistance junction to case	R_{thjc}	4.16	°C/W

ISO 14001 CERTIFIED
AN ISO 9002 COMPANY

ELECTRICAL CHARACTERISTICS :[Tc = 25 °C unless otherwise noted]

Characteristic	Symbol	Min	Typ	Max	Unit
*** OFF CHARACTERISTICS :**					
Collector–Emitter Breakdown Voltage [Ic =50 mAdc, I_B = 0]	$V_{CEO(sus)}$	60			Vdc
Collector Cutoff Current [V_{CB} =20 Vdc, I_B = 0]	I_{CB0}			100	✪Adc
Collector–Base Breakdown Voltage [Ic =1mAdc, I_E = 0]	BV_{CBO}	60			Vdc
Emitter Cutoff Current [V_{EB}=5Vdc, IC=0]	I_{EBO}			100	✪Adc
*** ON CHARACTERISTICS (1):**					
DC Current Gain [Ic = 0.1 Adc , V_{CE} = 2.0 Vdc] [Ic =2 Adc , V_{CE} =2.0 Vdc]	h_{FE}	40 40		320	
Collector-Emitter Saturation Voltage [Ic = 2Adc , I_B = 0.2Adc)	$V_{CE(sat)}$			1	Vdc
Emitter–Base Saturation Voltage [Ic =1Adc, V_{CE} =2V]	$V_{BE(ON)}$			1	Vdc
DYNAMIC CHARACTERISTICS :					
Current Gain – Bandwidth Product [Ic=0.5Adc,V_{CE}=5Vdc,ftest=1.0 MHz]	f_T		8		MHz

· (1) Pulse Test : Pulse Width <300μs , Duty Cycle < 2.0%