



SILICON PLASTIC POWER TRANSISTOR

NPN 2N5296

4A 36W

Technical Data

...designed for use in general-purpose switching and amplifier applications.

- ☞ DC Current Gain - $h_{FE} = 30-120$ @ $I_C = 1.0A_{dc}$
- ☞ Collector-Emitter Sustaining Voltage – $V_{CEO(sus)} = 40$ Vdc (Min)
- ☞ TO-220 Package

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector- Emitter Voltage	V_{CEO}	40	Vdc
Collector- Emitter Voltage	V_{CER}	50	Vdc
Collector – Base Voltage	V_{CBO}	60	Vdc
Emitter Base Voltage	V_{EB}	5	Vdc
Collector Current – Continuous	I_C	4	Adc
Base Current	I_B	2	Adc
Total Power Dissipation @ $T_C = 25^\circ C$ Derate above $25^\circ C$	PD	36 0.288	Watts W/ $^\circ C$
Operating and Storage junction Temperature Range	T_j, T_{stg}	-65 to +150	$^\circ C$

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max.	Unit
Thermal resistance junction to case	R_{thjc}	3.5	$^\circ C/W$



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

Characteristic	Symbol	Min	Typ	Max	Unit
* OFF CHARACTERISTICS :					
Collector–Emitter Sustaining Voltage (1) [I _c =100 mAdc, I _B = 0]	V _{CEO(sus)}	40			Vdc
Collector Cutoff Current [V _{CE} = 35 Vdc, V _{BE(off)} = 1.5 Vdc]	I _{CEX}			2	mAdc
Emitter Cutoff Current [V _{EB} =5.0 Vdc , I _c = 0]	I _{EBO}			1	mAdc
* ON CHARACTERISTICS (1):					
DC Current Gain [I _c = 1.0 Adc , V _{CE} = 4.0 Vdc]	h _{FE}	30		120	
Collector-Emitter Saturation Voltage [I _c =1Adc , I _B = 0.1 Adc)	V _{CE(sat)}			1.0	Vdc
Base-Emitter on Voltage [I _c =1.0 Adc , V _{CE} = 4.0. V _{DC}]	V _{BE(on)}			1.3	Vdc
DYNAMIC CHARACTERISTICS :					
Current Gain – Bandwidth Product [I _c =0.2Adc,V _{CE} =4Vdc,f _{test} =1.0 MHz]	f _T	0.8			MHz

- Indicates within JEDEC Registration Data.
- (1) Pulse Test : Pulse Width <300μs , Duty Cycle < 2.0%