

SILICON PLASTIC POWER TRANSISTOR
NPN 2SD880Y
3A 30W

Technical Data

...designed for Low Frequency Power Amplifier.

- ☞ Collector-Emitter Voltage: $V_{CEO}=60V$
- ☞ DC Current Gain: 20 @ $I_C=3A$
- ☞ 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} | 7 | Vdc |
| Collector Current – Continuous | I_C | 3 | Adc |
| Base Current | I_B | 0.3 | Adc |
| Total Power Dissipation @ $T_C = 25^\circ C$ Derate above $25^\circ C$ | PD | 30 0.24 | Watts W/ $^\circ C$ |
| Operating and Storage junction Temperature Range | T_j, T_{stg} | -55 to +150 | $^\circ C$ |

THERMAL CHARACTERISTICS

| Characteristic | Symbol | Max. | Unit |
|-------------------------------------|------------|------|--------------|
| Thermal resistance junction to case | R_{thjc} | 4.16 | $^\circ C/W$ |



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

| Characteristic | Symbol | Min | Typ | Max | Unit |
|---|-----------------------|-----------|-----|-----|------|
| * OFF CHARACTERISTICS : | | | | | |
| Collector–Emitter Breakdown Voltage [Ic =50 mAdc, IB = 0] | V _{CEO(sus)} | 60 | | | Vdc |
| Collector Cutoff Current [V _{CB} = 60 Vdc, IB = 0] | I _{CB0} | | | 100 | ⊛Adc |
| Collector–Base Breakdown Voltage [Ic =1mAdc, IE = 0] | BV _{CBO} | 60 | | | Vdc |
| Emitter Cutoff Current [V _{EB} =7Vdc, IC=0] | I _{EBO} | | | 100 | ⊛Adc |
| * ON CHARACTERISTICS (1): | | | | | |
| DC Current Gain [Ic = 0.5 Adc , V _{CE} = 5.0 Vdc] [Ic =3 Adc , V _{CE} =5.0 Vdc] | h _{FE} | 100 20 | | 200 | |
| Collector-Emitter Saturation Voltage [Ic = 3Adc , IB = 0.3Adc) | V _{CE(sat)} | | | 1 | Vdc |
| Emitter–Base Saturation Voltage [Ic =0.5Adc, V _{CE} =5V] | V _{BE(ON)} | | | 1 | Vdc |
| DYNAMIC CHARACTERISTICS : | | | | | |
| Current Gain – Bandwidth Product [Ic=0.5Adc,V _{CE} =5Vdc,ftest=1.0 MHz] | f _T | | 3 | | MHz |
| Collector Output Capacitance V _{CB} =10V,IE=0,f=1MHz | C _{OB} | | 70 | | pF |

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