SILICON PLASTIC POWER TRANSISTOR
NPN BD241A/B/C
3A 40W

Technical Data

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

- ☞ Collector-Emitter Saturation Voltage-
  V_{CE}=1.2Vdc(Max)@I_C=3Adc
- ☞ Collector-Emitter Sustaining Voltage-
  VCEO(sus)=100Vdc(Min)
- ☞ TO-220 Package

MAXIMUM RATINGS

Rating	Symbol	BD241A	BD241B	BD241C	Unit
Collector- Emitter Voltage	V_{CEO}	60	80	100	Vdc
Collector – Emitter Voltage	V_{CES}	70	90	115	Vdc
Emitter Base Voltage	V_{EB}	5			Vdc
Collector Current – Continuos Peak	I_C	3 5			Adc
Base Current	I_B	1			Adc
Total Power Dissipation @ TC = 25°C Derate above 25°C	PD	40 0.32			Watts W/°C
Operating and Storage junction Temperature Range	Tj,Tstg	-65 to +150			°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max.	Unit
Thermal resistance junction to case	R_{thjc}	3.125	°C/W

ISO 14001 CERTIFIED
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ELECTRICAL CHARACTERISTICS :[Tc = 25 °C unless otherwise noted]

Characteristic	Symbol	Min	Typ	Max	Unit
*** OFF CHARACTERISTICS :**					
Collector–Emitter Sustaining Voltage(1) [Ic =30 mAdc, I_B = 0] BD241A BD241B BD241C	$V_{CEO(sus)}$	 60 80 100			Vdc
Collector Cutoff Current [V_{CE} = 30 Vdc, I_B = 0] BD241A [V_{CE}=60Vdc,I_B=0] BD241B,BD241C	I_{CE0}			 0.3 0.3	mAdc
Collector Cutoff Current [V_{CE}=60Vdc, V_{BE} =0] BD241A [V_{CE}=80Vdc, V_{BE} =0] BD241B [V_{CE}=100Vdc,V_{BE} =0] BD241C	I_{CES}			 200 200 200	✪Adc
Emitter Cutoff Current [V_{EB} =5.0 Vdc , Ic = 0]	I_{EBO}			1	mAdc
*** ON CHARACTERISTICS (1):**					
DC Current Gain [Ic = 1.0Adc , V_{CE} = 4.0 Vdc] [Ic = 3Adc , V_{CE} = 4.0 Vdc]	h_{FE}	 25 10			
Collector-Emitter Saturation Voltage [Ic = 3Adc , I_B =600mAdc]	$V_{CE(sat)}$			1.2	Vdc
Base-Emitter on Voltage [Ic =3 Adc , V_{CE}= 4V	$V_{BE(on)}$			1.8	Vdc
DYNAMIC CHARACTERISTICS :					
Current Gain – Bandwidth Product [Ic=0.5Adc,V_{CE}=10Vdc,ftest=1.0 MHz]	f_T	3			MHz
Small-Signal Current Gain [I_C=0.5 Adc, V_{CE}=10 Vdc, f=1kHz]	hfe	20			

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