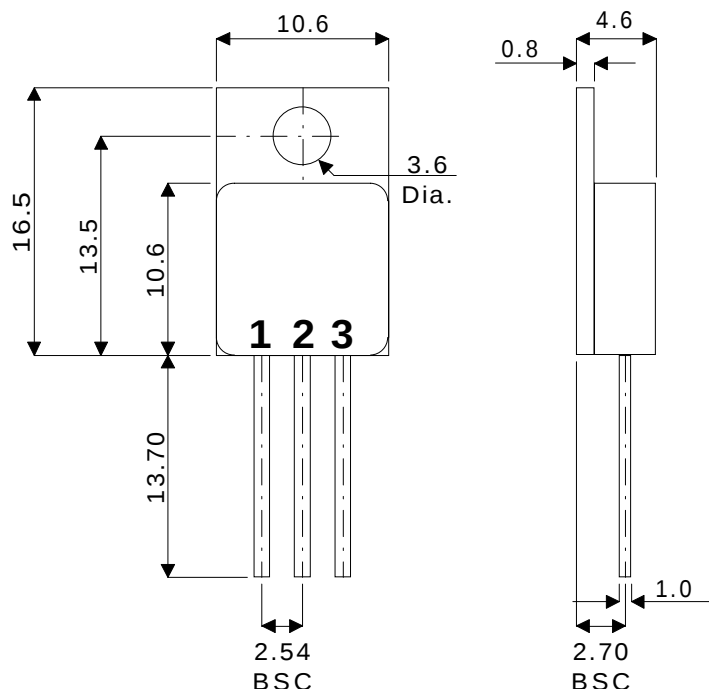


MECHANICAL DATA

Dimensions in mm



TO220 PACKAGE

Pin 1 – Base Pin 2 – Collector Pin 3 – Emitter

SILICON NPN EPITAXIAL BASE IN TO220 METAL PACKAGE

FEATURES

- HERMETIC METAL PACKAGES
- HIGH RELIABILITY
- MILITARY AND SPACE OPTIONS
- SCREENING TO CECC LEVELS
- FULLY ISOLATED

APPLICATIONS

- POWER LINEAR AND SWITCHING APPLICATIONS
- GENERAL PURPOSE POWER

ABSOLUTE MAXIMUM RATINGS ($T_{case}=25^{\circ}C$ unless otherwise stated)

V_{CBO}	Collector - Base voltage ($I_E = 0$)	80V
V_{CEO}	Collector - Emitter voltage ($I_B = 0$)	80V
V_{EBO}	Emitter - Base voltage ($I_C = 0$)	6V
I_C	Collector current	5A
I_B	Base current	1A
P_{tot}	Total power dissipation at $T_{case} = 25^{\circ}C$	10W
T_{stg}	Storage Temperature	-65 to 200°C
T_j	Junction Temperature	200°C

ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
I_{CBO}	Collector cut-off current	$I_E = 0$	$V_{CB} = 80V$			10	μA
I_{CEO}	Collector cut-off current	$I_B = 0$	$V_{CE} = 75V$			100	
I_{EBO}	Emitter cut-off current	$V_{EB} = 6V$				100	
$V_{CEO(sus)}^*$	Collector - Emitter Sustaining voltage	$I_B = 0$	$I_C = 50mA$	80			V
$V_{CE(sat)}^*$	Collector - Emitter Saturation voltage	$I_C = 5A$	$I_B = 0.5A$			1.2	
		$I_C = 2A$	$I_B = 0.2A$			0.7	
$V_{BE(sat)}^*$	Base - Emitter Saturation voltage	$I_C = 2A$	$I_B = 0.2A$			1.2	
h_{FE}^*	DC Current gain	$I_C = 0.5A$	$V_{CE} = 2V$	60			
		$I_C = 2A$	$V_{CE} = 2V$	60		240	
		$I_C = 5A$	$V_{CE} = 2V$	40			
f_T	Transition frequency	$I_C = 0.5A$	$V_{CE} = 10V$	10			MHz

*Pulsed : Pulse duration = 300 μs , duty cycle = 1.5%

SWITCHING CHARACTERISTICS

Parameter		Test Conditions		Max.	Unit
t_{on}	On Time ($t_d + t_r$)	$I_C = 2A$	$V_{CC} = 10V$ $I_{B1} = 0.2A$	0.7	μs
t_s	Storage Time	$I_C = 2A$	$V_{CC} = 10V$	2.0	μs
t_r	Fall Time	$I_{B1} = -I_{B2} = 0.2A$		0.8	μs

THERMAL DATA

$R_{THj-case}$	Thermal resistance junction - case	Max. 17.5°C/W
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** Smooth flat surface using thermal grease.