

MECHANICAL DATA

Dimensions in mm

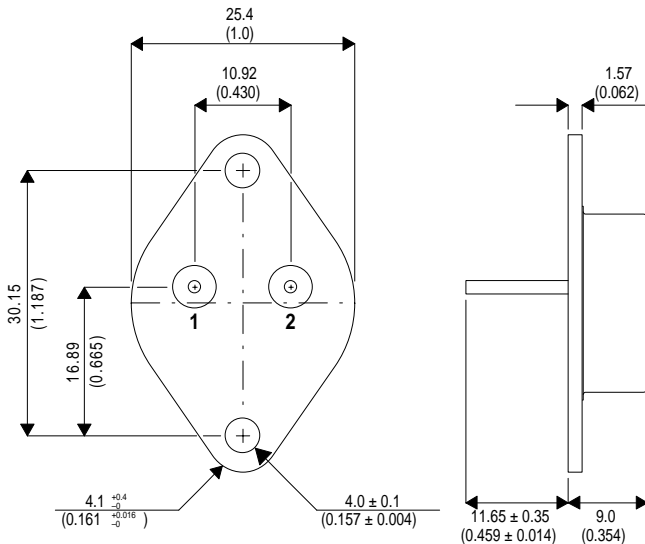
NPN MULTI-EPITAXIAL TRANSISTOR

FEATURES

- LOW $V_{CE(SAT)}$
- FAST SWITCHING
- SINGLE CHIP CONSTRUCTION
- HIGH SWITCHING CURRENTS
- HIGH RELIABILITY
- MILITARY OPTIONS AVAILABLE

APPLICATIONS

- SWITCHING REGULATORS
- MOTOR DRIVE CONTROL
- HIGH POWER CONVERTORS



Tolerance ± 0.127 (0.005) unless otherwise stated

TO3B

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

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

V_{CEX}	Collector – Emitter Voltage ($V_{BE} = -1.5V$)	400V
V_{CEO}	Collector – Emitter Voltage ($I_B = 0$)	250V
V_{EBO}	Emitter – Base Voltage	10V
I_C	Collector Current	60A
$I_{C(PK)}$	Peak Collector Current	80A
P_{tot}	Total Dissipation at $T_{case} = 25^{\circ}C$	300W
T_{stg}	Storage Temperature	-55 to 200°C
T_J	Maximum Operating Junction Temperature	200°C
R_{th}	Thermal Resistance (junction-case)	Max. 58°C/W

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

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CEX} Collector Cut-Off Current	$V_{BE} = 1.5V$ $V_{CEX} = 400V$ $T_C = 150^{\circ}C$			0.1 5	mA
I_{EBO} Emitter Cut-Off Current	$V_{BE} = 8V$			0.1	mA
$V_{CE(sat)*}$ Collector – Emitter Saturation Voltage	$I_C = 20A$ $I_B = 2A$		0.4	0.6	V
	$I_C = 40A$ $I_B = 8A$		0.6	0.8	
$V_{BE(sat)*}$ Base – Emitter Saturation Voltage	$I_C = 20A$ $I_B = 2A$		1.0	1.1	V
	$I_C = 40A$ $I_B = 5A$		1.2	1.4	
h_{FE} DC Current Gain	$I_C = 20A$ $V_{CE} = 4V$	15	35		—
	$I_C = 40A$ $V_{CE} = 4V$	5	15		

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

t_s Storage Time	$I_C = 30A$ $V_{CC} = 200V$ $I_{B1} = -I_{B2} = 10 A$			1.8	μA
t_f Fall Time				0.35	