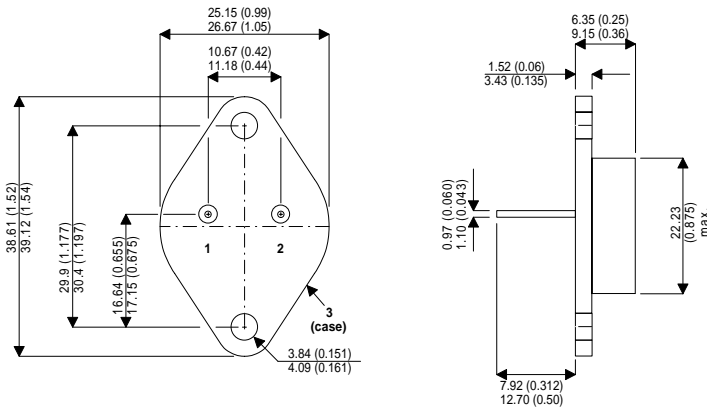


MECHANICAL DATA

Dimensions in mm(inches)

**NPN MULTI - EPITAXIAL
POWER TRANSISTOR**



FEATURES

- HIGH CURRENT
- FAST SWITCHING
- HIGH RELIABILITY

APPLICATIONS

- Industrial Equipment

TO-3

PIN 1 — Base
 PIN 2 — Emitter
 Case is Collector.

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

V_{CBO}	Collector – Base Voltage ($I_E = 0$)	160V
V_{CER}	Collector – Emitter Voltage ($R_{BE} = 100\Omega$)	150V
V_{CEX}	Collector – Emitter Voltage ($V_{BE} = -1.5V$)	160V
V_{CEO}	Collector – Emitter Voltage ($I_B = 0$)	125V
V_{EBO}	Emitter – Base Voltage ($I_C = 0$)	7V
I_C	Collector Current	50A
I_{CM}	Peak Collector Current ($t_p = 10$ ms)	60A
I_B	Base Current	10A
P_{tot}	Total Power Dissipation at $T_{case} \leq 25^{\circ}C$	250W
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
$V_{CEO(sus)^*}$ Collector - Emitter Sustaining Voltage	$I_C = 250mA$ $L = 25mH$ $I_B = 0$	125			V
$V_{(BR)EBO}$ Emitter – Base Voltage	$I_E = 50mA$	7			
$V_{CE(sat)^*}$ Collector Emitter Saturation Voltage	$I_C = 25A$ $I_C = 50A$ $V_{CE} = 2.5A$ $I_B = 5A$		0.3 0.7	0.6 1.2	
$V_{BE(sat)^*}$ Base Emitter Saturation Voltage	$I_C = 50A$ $I_B = 5A$		1.4	2	
I_{CEO} Collector Cut-off Current	$V_{CE} = 100V$ $I_B = 0$			3	mA
I_{CEX} Collector Cut-off Current	$V_{CE} = V_{CEX}$ $V_{BE} = -1.5V$ $T_C = 125^{\circ}C$			3 12	
I_{EBO} Emitter Cut-off Current	$I_C = 0$ $V_{EB} = 5V$			1	
h_{FE}^* DC Current Gain	$V_{CE} = 2V$ $V_{CE} = 4V$ $I_C = 25A$ $I_C = 50A$	20 10		60	—
f_T Transition Frequency	$I_C = 2A$ $V_{CE} = 15V$ $f = 100MHz$	8			MHz
t_{on} Turn-On Time	$I_C = 50A$ $I_B = 5A$			1.5	μs
t_s Storage Time	$I_C = 50A$ $I_{B1} = -I_{B2} = 5A$			1.2	
t_f Fall Time	$I_C = 50A$ $I_{B1} = -I_{B2} = 5A$			0.3	

NOTES

* Pulse Test: $t_p = 300\mu s$, $\delta \leq 2\%$

THERMAL CHARACTERISTICS

$R_{\theta JC}$ Thermal Resistance Junction to Case			0.7	$^{\circ}C/W$
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