

DESCRIPTION

- High Voltage Capability
- Fast Switching Speed
- Low Saturation Voltage

APPLICATIONS

Designed for high voltage switching applications such as:

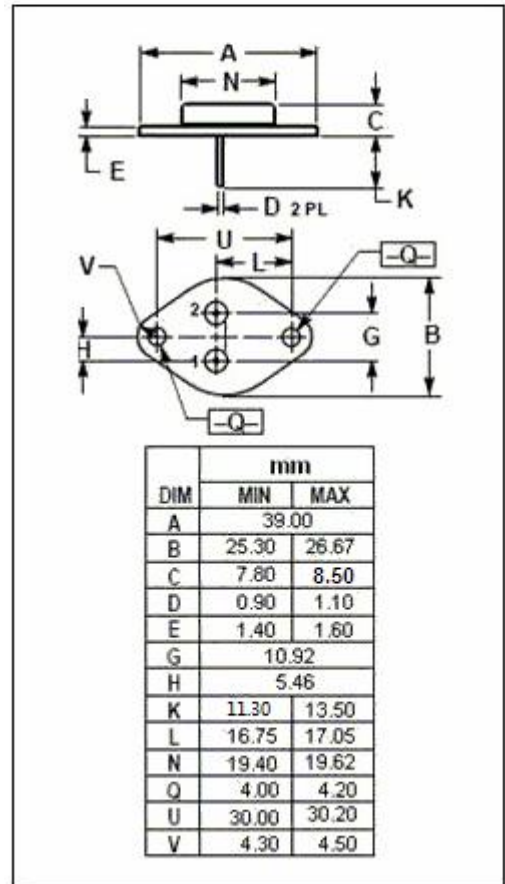
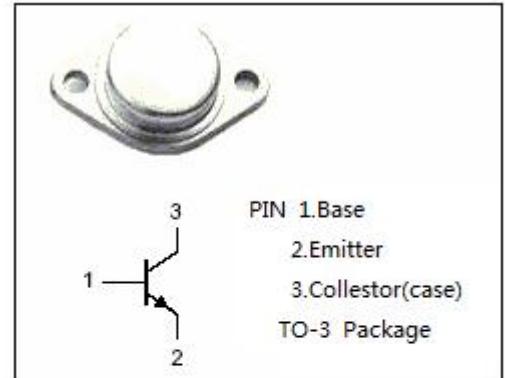
- Off-line power supplies
- Converter circuits
- PWM regulators

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CEV}	Collector-Emitter Voltage	650	V
V _{CEx}	Collector-Emitter Voltage	450	V
V _{CEO}	Collector-Emitter Voltage	400	V
V _{EBO}	Emitter-Base Voltage	8.0	V
I _C	Collector Current-Continuous	15	A
I _{CM}	Collector Current-Peak	20	A
I _B	Base Current-Continuous	5.0	A
P _C	Collector Power Dissipation@T _c =25°C	175	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-65~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	1.0	°C/W



ELECTRICAL CHARACTERISTICS

$T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=50\text{mA}; I_B=0$	400		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C= 15\text{A}; I_B= 3.0\text{A}$		1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 15\text{A}; I_B= 3.0\text{A}$		1.5	V
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 8.0\text{V}; I_C=0$		2.0	mA
h_{FE}	DC Current Gain	$I_C= 15\text{A}; V_{CE}= 3\text{V}$	8.0		
f_T	Current Gain-Bandwidth Product	$I_C= 1.0\text{A}; V_{CE}= 10\text{V}; f_{test}=5.0\text{MHz}$	3.0		MHz
C_{OB}	Output Capacitance	$I_E= 0; V_{CB}= 10\text{V}; f_{test}=0.1\text{MHz}$		500	pF

Switching times

t_d	Delay Time	$I_C= 15\text{A}, V_{CC}= 200\text{V}, I_{B1}= -I_{B2}= 3\text{A},$ $t_p=20 \mu\text{s}, \text{Duty Cycle} \leq 2.0\%$ $V_{BB}=6\text{V}, R_L=13.5 \Omega$		0.2	μs
t_r	Rise Time			0.6	μs
t_s	Storage Time			2.5	μs
t_f	Fall Time			0.6	μs