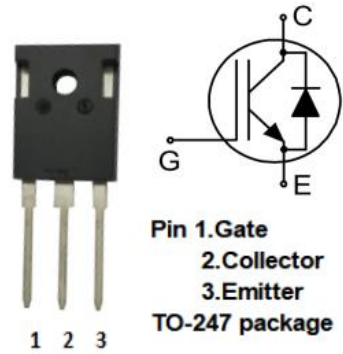


DESCRIPTION

- Low Saturation Voltage: $V_{CE(sat)}=2.2V@I_C=60A$
- Short Circuit Capability
- Low Power Loss

APPLICATIONS

- Power Inverters
- SMPS
- Battery Chargers



ABSOLUTE MAXIMUM RATINGS

SYMBOL	PARAMETER	VALUE	UNIT
V_{CES}	Collector-Emitter Voltage	650	V
V_{GES}	Gate-Emitter Voltage	± 20	V
I_C	Collector Current-Continuous @ $T_C=25^\circ C$	145	A
I_C	Collector Current-Continuous @ $T_C=110^\circ C$	60	A
I_{CM}	Pulsed Collector Current@ $T_C=25^\circ C$	265	A
I_F	Diode Forward Current @ $T_C=110^\circ C$	47	A
P_D	Power Dissipation @ $T_C=25^\circ C$	536	W
T_j	Operating Junction Temperature	-55~175	$^\circ C$
T_{stg}	Storage Temperature Range	-55~175	$^\circ C$

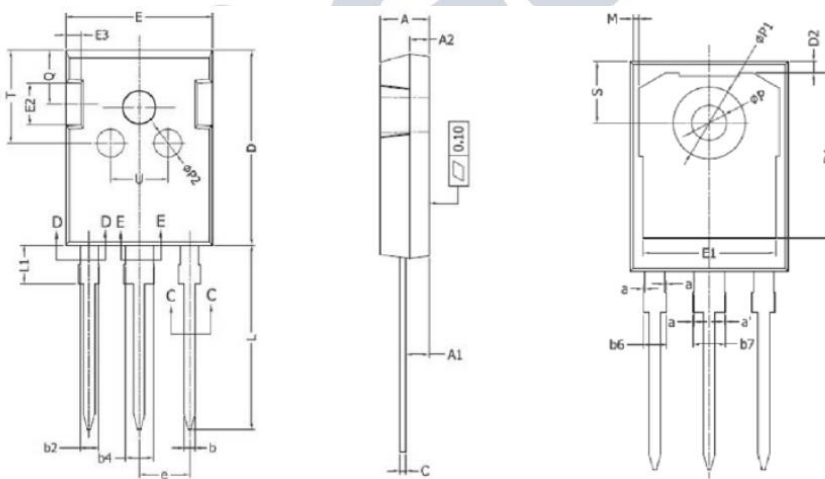
THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance,Junction to Case IGBT	0.28	$^\circ C/W$
$R_{th\ j-c}$	Thermal Resistance,Junction to Case diode	0.60	$^\circ C/W$

STATIC CHARACTERISTICS (T_J = 25 °C unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
V _{CE(s)}	Collector-Emitter Breakdown Voltage	V _{GE} =0, I _C = 0.25mA	650	--	--	V
V _{GE(th)}	Gate-Emitter Threshold Voltage	V _{GE} = V _{CE} , I _C =0.25mA	4.0		6.5	V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 60A, V _{CE} = 15V, T _C =25°C	--		2.2	V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 60A, V _{CE} = 15V, T _C =150°C	--	2.1	--	V
I _{CE(s)}	Zero Gate Voltage Collector Current	V _{CE} = 650V, V _{GE} =0V	--	--	25	uA
I _{GES}	Gate-Emitter Leakage Current	V _{GE} = ±20V, V _{CE} =0V	--	--	± 100	nA
V _F	Diode Forward Voltage	I _F =30A, T _J =25°C	--	--	2.5	V

PACKAGE OUTLINE (UNIT: mm)



SYMBOL	MIN	NOM	MAX
A	4.90	5.00	5.10
A1	2.31	2.41	2.51
A2	1.90	2.00	2.10
a	0	---	0.15
a'	0	---	0.15
b	1.16	---	1.26
b1	1.15	1.2	1.22
b2	1.96	---	2.06
b3	1.95	2.00	2.02
b4	2.96	---	3.06
b5	2.96	3.00	3.02
b6	---	---	2.25
b7	---	---	3.25
c	0.59	---	0.66
c1	0.58	0.60	0.62
D	20.90	21.00	21.10
D1	16.25	16.55	16.85
D2	1.05	1.17	1.35
E	15.70	15.80	15.90
E1	13.10	13.30	13.50
E2	4.40	4.50	4.60
E3	1.50	1.60	1.70
e	5.436 BSC		
L	19.80	19.92	20.10
L1	---	---	4.30
M	0.35	---	0.95
P	3.40	3.50	3.60
P1	7.00	---	7.40
P2	2.40	2.50	2.60
Q	5.60	---	6.00
S	6.05	6.15	6.25
T	9.80	---	10.20
U	6.00	---	6.40



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