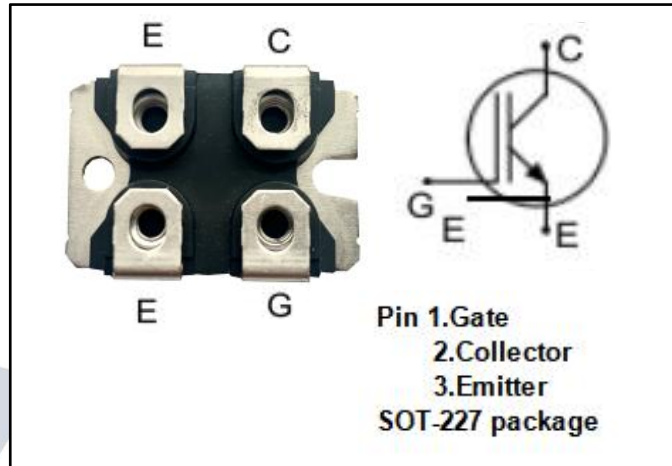


### DESCRIPTION

- Low Saturation Voltage: $V_{CE(sat)}=1.6V@I_C=100A$
- High Current Capability
- Off Losses Include Tail Current
- Low Gate Charge

### APPLICATIONS

- Aluminum Welding Equipment
- Low Frequency Motor Controls
- UPS,PFC
- High Voltage Auxiliaries



### ABSOLUTE MAXIMUM RATINGS

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CES}$	Collector-Emitter Voltage	600	V
$V_{GES}$	Gate-Emitter Voltage	$\pm 20$	V
$I_C$	Collector Current-Continuous @ $T_c=25^\circ C$	200	A
	Collector Current-Continuous @ $T_c=100^\circ C$	150	A
$I_{CM}$	Pulsed Collector Current@ $T_c=25^\circ C$	400	A
$P_D$	Power Dissipation , $T_C=25^\circ C$	600	W
$T_j$	Max. Operating Junction Temperature	-55~175	$^\circ C$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ C$
$V_{ISO}$	Insulation withstand voltage (DC)	2500	V



**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case Max	0.21	$^{\circ}C/W$

**ELECTRICAL CHARACTERISTICS**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$V_{CES}$	Collector-Emitter Breakdown Voltage	$V_{GE}=0; I_C=0.25mA$	600	--	--	V
$V_{GE(th)}$	Gate-Emitter Threshold Voltage	$V_{GE}=V_{CE}; I_C=0.25mA$	3	--	5	V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=100A; V_{CE}=15V, T_J=25^{\circ}C$	--	1.2	1.6	V
		$I_C=150A; V_{CE}=15V, T_J=100^{\circ}C$	--	1.2	--	V
$I_{CES}$	Zero Gate Voltage Collector Current	$V_{CE}=600V; V_{GE}=0, T_J=25^{\circ}C$	--	--	0.5	mA
		$V_{CE}=600V; V_{GE}=0, T_J=125^{\circ}C$	--	--	5	mA
$I_{GES}$	Gate-Emitter Leakage Current	$V_{GE}=\pm 20V; V_{CE}=0$	--	--	$\pm 100$	nA
$C_{ies}$	Input Capacitance	$V_{GS}=0V, V_{CS}=25V, f=1.0MHz$	--	1890	--	pF
$C_{oes}$	Output Capacitance		--	1352	--	
$C_{res}$	Reverse Transfer Capacitance		--	110	--	
$Q_g$	Total Gate Charge	$V_{GE}=15V, I_C=100A, V_{CE}=480V$	--	780	--	nC
$Q_{gs}$	Gate-Source Charge		--	85	--	
$Q_{gd}$	Gate-Drain Charge		--	190	--	



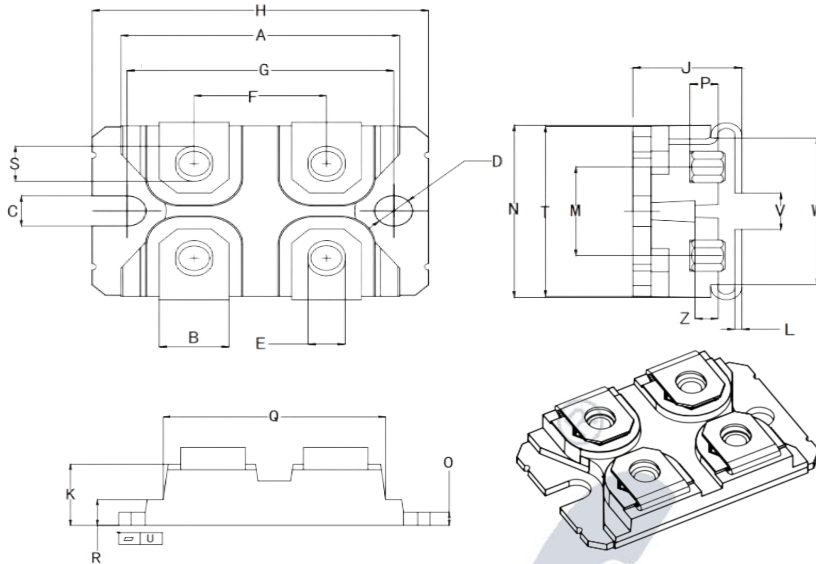
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## IGBT

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
$t_{d(on)}$	Turn-on Delay Time	$V_{GE} = 15V,$ $I_C = 100A,$ $V_{CE} = 480V,$ $R_G = 3\Omega$ $T_J = 25^\circ C$	--	75	--	ns
$t_r$	Turn-on Rise Time		--	160	--	ns
$(di/dt)_{on}$	Turn-on current slope		--	1995	--	A/ $\mu s$
$t_{d(off)}$	Turn-off Delay Time		--	2600	--	ns
$t_f$	Turn-off Fall Time		--	1557	--	ns
$E_{on}$	Turn-on switching losses		--	18	--	mJ
$E_{off}$	Turn-off switching losses		--	72	--	mJ
$E_{ts}$	Total switching losses	--	90	--	mJ	
$t_{d(on)}$	Turn-on Delay Time	$V_{GE} = 15V,$ $I_C = 100A,$ $V_{CE} = 480V,$ $R_G = 3\Omega$ $T_J = 125^\circ C$	--	89	--	ns
$t_r$	Turn-on Rise Time		--	155	--	ns
$(di/dt)_{on}$	Turn-on current slope		--	2100	--	A/ $\mu s$
$t_{d(off)}$	Turn-off Delay Time		--	2615	--	ns
$t_f$	Turn-off Fall Time		--	1554	--	ns
$E_{on}$	Turn-on switching losses		--	20	--	mJ
$E_{off}$	Turn-off switching losses		--	113	--	mJ
$E_{ts}$	Total switching losses	--	133	--	mJ	

### Package Dimensions (UNIT: MM):



DIM	Millimeter	
	min	max
A	31.40	31.60
B	7.70	8.10
C	4.20	4.40
D	4.20	4.40
E	4.10	4.40
F	14.90	15.10
G	30.10	30.30
H	38.00	38.40
J	12.00	12.60
K	9.35	9.65
L	0.74	0.84
M	12.30	12.70
N	24.40	25.00
O	1.90	2.10
P	2.92	3.32
Q	26.60	27.00
R	3.80	4.20
S	4.95	5.45
T	23.70	24.30
U	0	0.10
V	3.50	5.50
W	20.15	20.45
Z	2.50	2.70

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