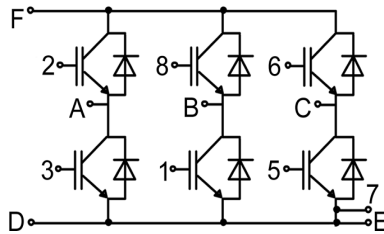
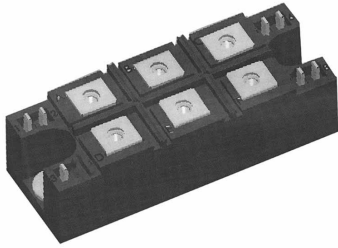
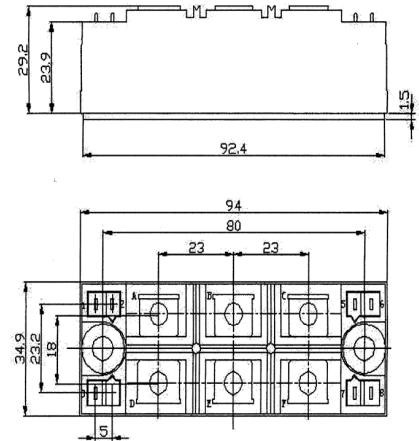


6SI15N12

NPT IGBT Modules



Dimensions in mm (1mm = 0.0394")



Absolute Maximum Ratings

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

Symbol	Conditions	Values	Units
V_{CES}		1200	V
I_C	$T_c = 25(80)^\circ\text{C}$	25(15)	A
I_{CRM}	$T_c = 25(80)^\circ\text{C}$, $t_P = 1\text{ms}$	50(30)	A
V_{GES}		± 20	V
P_{tot}		145	W
$T_{Vj}, (T_{stg})$	$T_{OPERATION} \leq T_{stg}$	$+150(-40...+125)$	$^\circ\text{C}$
V_{isol}	AC, 1min	2500	V
R_{thJC}		≤ 0.86	K/W
R_{thJCD}		≤ 1.5	

6SI15N12

NPT IGBT Modules

Electrical Characteristics

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

Symbol	Conditions	min.	typ.	max.	Units
Static Characteristics					
$V_{GE(th)}$	$V_{GE} = V_{CE}$, $I_c = 0.6\text{mA}$	4.5	5.5	6.5	V
I_{CES}	$V_{GE} = 0$; $V_{CE} = 1200\text{V}$; $T_j = 25(125)^\circ\text{C}$		0.3(1.2)	0.5	mA
I_{GES}	$V_{GE} = 20\text{V}$, $V_{CE} = 0$			150	nA
$V_{CE(sat)}$	$I_c = 15\text{A}$; $V_{GE} = 15\text{V}$; $T_j = 25(125)^\circ\text{C}$		2.5(3.1)	3.0(3.7)	V
AC Characteristics					
C_{iss}	under following conditions		1000		pF
C_{oss}	$V_{GE} = 0$, $V_{CE} = 25\text{V}$, $f = 1\text{MHz}$		150		
C_{rss}			70		
g_{fs}	$V_{CE} = 20\text{V}$, $I_c = 15\text{A}$	5.5			S
Switching Characteristics					
$t_{d(on)}$	$V_{CC} = 600\text{V}$, $I_c = 15\text{A}$		55	110	ns
t_r	$R_{Gon} = R_{Goff} = 82\Omega$, $T_j = 125^\circ\text{C}$		45	90	
$t_{d(off)}$	$V_{GE} = \pm 15\text{V}$		400	600	
t_f			70	100	
FWD under following conditions:					
V_F	$I_F = 15\text{A}$, $V_{GE} = 0\text{V}$, $T_j = 25(125)^\circ\text{C}$		2.4(1.9)	2.9	V
t_{rr}	$I_F = 15\text{A}$, $V_R = -600\text{V}$, $V_{GE} = 0\text{V}$, $di/dt = -800\text{A}/\mu\text{s}$, $T_j = 125^\circ\text{C}$		0.1		us
Q_{rr}	$I_F = 15\text{A}$, $V_{GE} = 0\text{V}$, $V_R = -600\text{V}$ $di/dt = -800\text{A}/\mu\text{s}$, $T_j = 25(125)^\circ\text{C}$		1(3)		uC
Mechanical Data					
M_d	Mounting torque (M5) Terminal connection torque (M5)		2.5-4.0/22-35 2.5-4.0/22-35		Nm/lb.in.
w				190	g