

GCA200EA60

IGBT Module

$I_c = 200A$, $V_{CES} = 600V$, $V_{CE(sat)} = 1.35V$

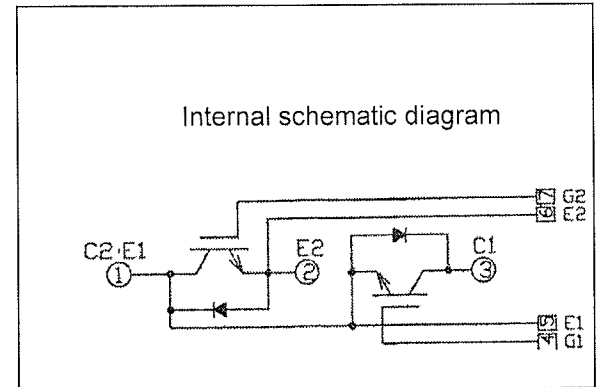
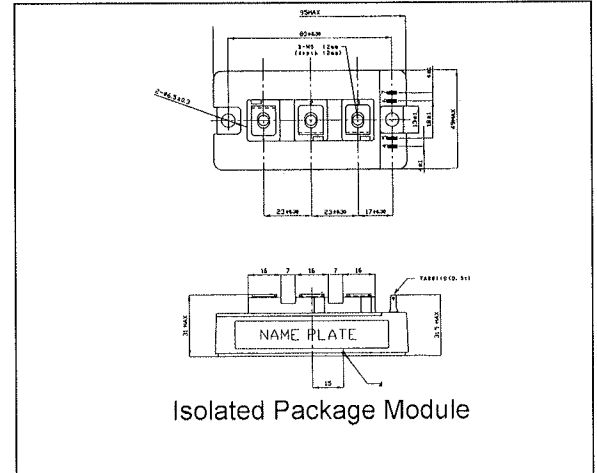
SanRex Dual IGBT Module **GCA200EA60** is designed for applications requiring low conduction loss - $V_{CE(sat)}$. It has an over voltage clamp circuit to reduce or eliminate the need for snubber components in the circuit. It achieves very low thermal resistance by employing thermally conductive aluminum nitride isolation.

Features

- * Very Low Collector-Emitter Saturation Voltage - $V_{CE(sat)}$
- * Over Voltage Clamp Circuit
- * Low Drive Power
- * Low Thermal Resistance

Typical Applications

- * Switch of AC/DC Welding Machines
- * Uninterruptible Power Supplies (UPS)
- * Motor Controls
- * Switch of Power Supply for Plating



< Maximum Ratings >

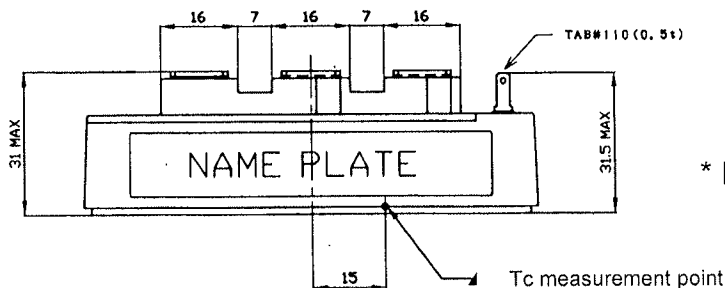
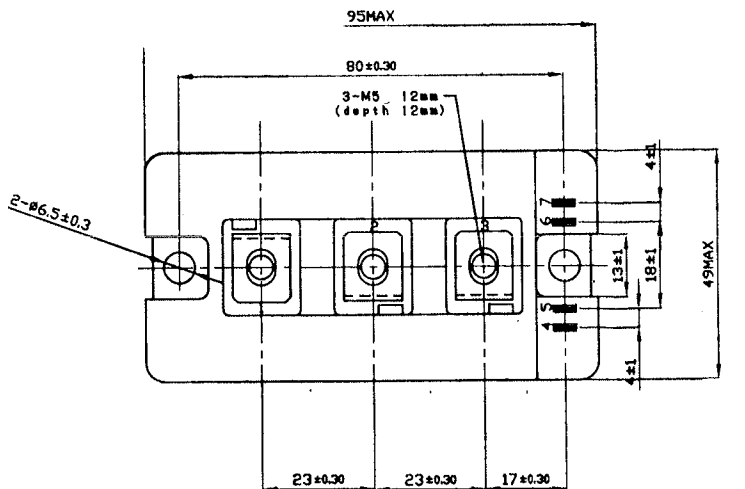
$T_j = 25^\circ C$ (unless otherwise noted) per diode

Symbol	Item	Conditions	Ratings	Unit
V_{CES}	Collector-Emitter Voltage	Gate – Emitter shorted	600	V
V_{GES}	Gate-Emitter Voltage	Collector – Emitter shorted	± 20	V
I_c	Collector Current (DC)	DC	200	A
I_{CP}	Collector Current (Pulse)	Pulse (1 ms)	400	A
$-I_c$	Reverse Collector Current		200	A
P_T	Power Dissipation	$T_c = 25^\circ C$	780	W
T_j	Junction Temperature		150	$^\circ C$
T_{stg}	Storage Temperature		-40 to +125	$^\circ C$
V_{ISO}	Isolation Voltage (R.M.S.)	A.C. 1 minute	2500	V
	Mounting Torque	Mounting (M6)	Recommended 2.5-3.9	N·m
		Terminal (M5)	Recommended 1.5-2.5	
	Mass	Typical Value	225	g

< Electrical Characteristics >

T_j = 25°C (unless otherwise noted) per diode

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I _{GES}	Gate Leakage Current	V _{GE} = ±20, V _{CE} = 0V			±20	μA
I _{CES}	Collector Cut-Off Current	V _{CE} = 500V, V _{GE} = 0V			5.0	μA
V _{(BR)CES}	Collector-Emmitter Breakdown Voltage	V _{GE} = 0V, I _C = 1mA	620	650		V
V _{GE(th)}	Gate Theshold Voltage	V _{CE} = 10V, I _C = 20mA	5.5	6.0	6.5	V
V _{CE(sat)}	Collector-Emmitter Saturation Voltage	I _C = 200A, V _{GE} = 15V	1.2	1.35	1.45	V
C _{ies}	Input Capacitance	V _{CE} = 10V, V _{GE} = 0V, f = 1MHz	10	14	18	nF
t _r	Switching	Rise Time	0.2	0.4	0.6	μs
t _{d(on)}		Turn-on Delay Time				
t _f	Time	Fall Time	1.2	1.5	1.8	μs
t _{d(off)}		Turn-off Delay Time				
V _{ECS}	Emitter-Collector Voltage	-I _C = 200A, V _{GE} = 0V		1.3	1.45	V
t _{rr}	Reverse Recovery Time	-I _C = 200A, V _{GE} = -10V di / dt = 400A/μs		1.0	1.5	μs
R _{th(j-c)}	Thermal Resistance	IGBT-Case			0.16	°C/W
		Diode-Case			0.40	



* Dimensions in millimeters