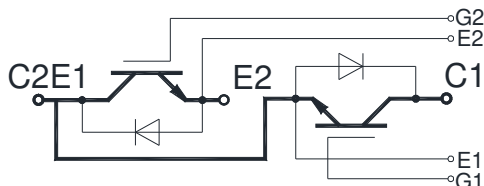




MRI 600.12-E

2 in 1 IGBT Modules



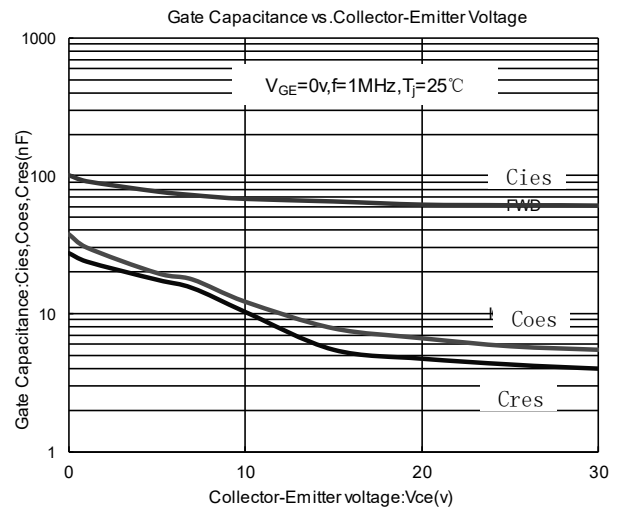
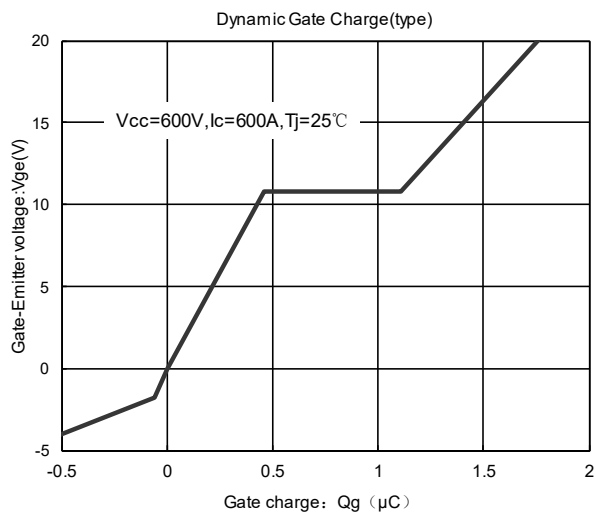
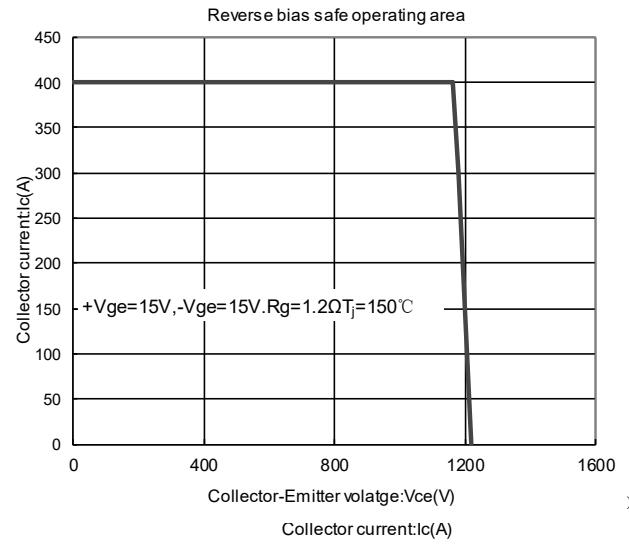
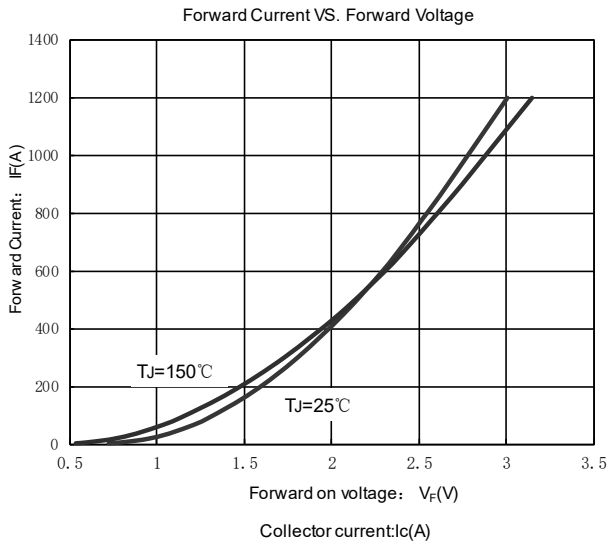
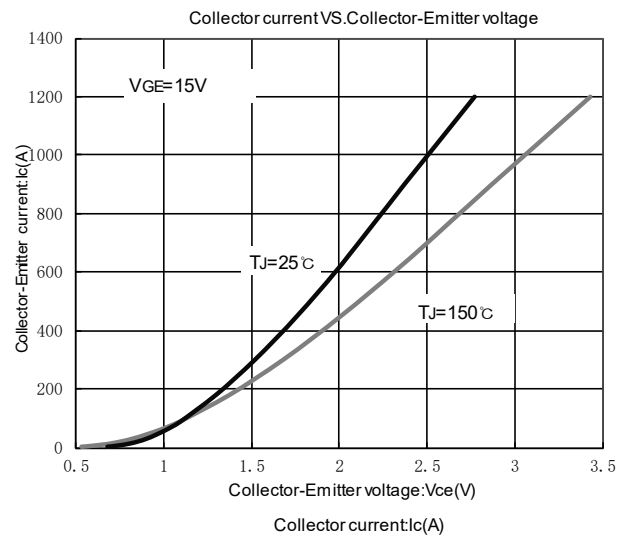
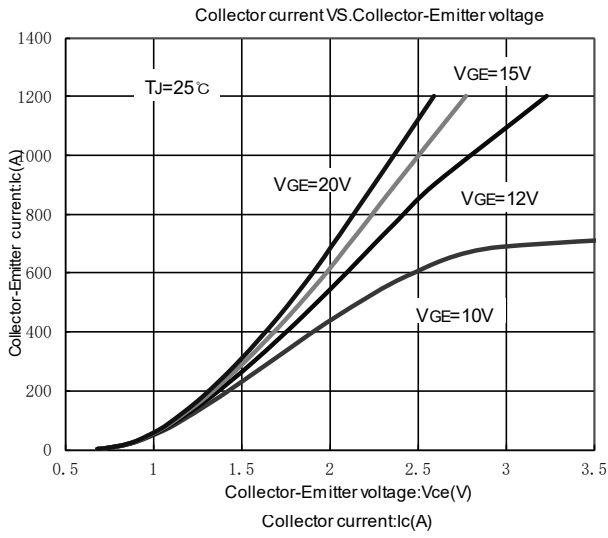
Features:

- Low V_{CEsat}
- Standard Housing

Typical Applications:

- Motor Drive
- Servo Drive
- Uninterruptible Power Supply System
- Wind Turbines
- High Power Converters

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	VALUE			UNIT
			Min	Type	Max	
V_{CES}	Collector-Emitter voltage	$T_j=25^{\circ}\text{C}$			1250	V
V_{GES}	Gate-Emitter voltage	$T_j=25^{\circ}\text{C}$			± 30	V
I_c	Collector current	Continuous@ $T_c=100^{\circ}\text{C}$			600	A
I_{CP}		$T_P=1\text{ms}$			1200	A
P_C	Collector power dissipation	$T_j=150^{\circ}\text{C}$, 1 device			3750	W
T_j	Junction temperature	/			175	$^{\circ}\text{C}$
T_{stg}	Storage temperature	/	-40		125	$^{\circ}\text{C}$
V_{iso}	Isolation between terminal and copper base	$T_j=25^{\circ}\text{C}$, AC: 1minute	3000			V
Screw torque	Mounting(M5)	/	3.0	4.5	6.0	N·m
	Terminals(M6)	/	3.0	4.0	6.0	N·m
I_{CES}	Zero gate voltage collector current	$T_j=25^{\circ}\text{C}$, $V_{CE}=1200\text{V}$, $V_{GE}=0\text{V}$			1.5	mA
I_{GES}	Gate-Emitter leakage current	$T_j=25^{\circ}\text{C}$, $V_{CE}=0\text{V}$, $V_{GE}=\pm 20\text{V}$			± 0.5	μA
$V_{GE(th)}$	Gate-Emitter threshold voltage	$T_j=25^{\circ}\text{C}$, $V_{CE}=20\text{V}$, $I_c=150\text{mA}$	4.5		8.5	V
$V_{CE(sat)}$	Collector-Emitter saturation voltage	$T_j=25^{\circ}\text{C}$, $V_{GE}=15\text{V}$, $I_c=600\text{A}$		1.96	2.40	V
		$T_j=125^{\circ}\text{C}$, $V_{GE}=15\text{V}$, $I_c=600\text{A}$		2.25		V
		$T_j=150^{\circ}\text{C}$, $V_{GE}=15\text{V}$, $I_c=600\text{A}$		2.33		V
C_{ies}	Input capacitance	$T_j=25^{\circ}\text{C}$, $V_{CE}=10\text{V}$, $V_{GE}=0\text{V}$, $f=1\text{MHz}$		66.6		nF
t_{on}	Turn-on time	$T_j=150^{\circ}\text{C}$, $V_{CC}=600\text{V}$, $I_c=600\text{A}$, $V_{GE}=\pm 15\text{V}$, $R_g=1.2\Omega$, Inductive load		680		ns
t_r				95		ns
t_{off}	Turn-off time	$R_g=1.2\Omega$, Inductive load		730		ns
t_f				270		ns
tsc	Short circuit withstand time	$T_j=150^{\circ}\text{C}$, $V_{CC}=720\text{V}$, $V_{GE}=\pm 15\text{V}$, $R_g=1.2\Omega$	10			μs
V_F	Forward on voltage	$T_j=25^{\circ}\text{C}$, $I_F=600\text{A}$		2.28	2.48	V
		$T_j=125^{\circ}\text{C}$, $I_F=600\text{A}$		2.26		V
		$T_j=150^{\circ}\text{C}$, $I_F=600\text{A}$		2.20		V
t_{rr}	Reverse recovery time	$T_j=125^{\circ}\text{C}$, $I_F=600\text{A}$		220		ns
		$T_j=150^{\circ}\text{C}$, $I_F=600\text{A}$		250		ns
$R_{th(j-c)}$	Thermal resistance(1 device)	IGBT			0.04	$^{\circ}\text{C/W}$
		FWD			0.07	$^{\circ}\text{C/W}$
$R_{th(c-f)}$	Contact thermal resistance (1 device)	With thermal compound		0.050		$^{\circ}\text{C/W}$
R_{25}	Resistance	$T_{Vj}=25^{\circ}\text{C}$		5		k Ω
$B_{25/50}$	$R_2=R_{25} \exp [B_{25/50}(1/T_2-1/(298,15\text{K}))]$			3375		K
W_t	Weight				345	g
Outline		465H3				



Outline:

