Typical Application

DC motor control, temperature control and light control system.

Absolute Maximum Ratings (Packaged into modules, unless otherwise specified, T_{CASE}=25)

Parameter	Test Conditions	Symbol	Values			Unit
			12	16	18	
[redacted]		[redacted]	[redacted]			
Storage temperature range		T_{stg}	-40~125			
Repetitive peak off-state voltage	T_j=25	V_{DRM}	1200	1600	1800	
Repetitive peak reverse voltage	ή p ض p					

Average on-state current	T_C=85	$I_{T(AV)}/I_{F(AV)}$	250			A
Peak on-state surge current	t_P=10ms V_R=0.6V_{RRM}	I_{TSM}/I_{FSM}	8300			A
I^2t value for fusing	t_P=10ms V_R=0.6V_{RRM}	I^2t	344450			A^2s
Critical rate of rise of on-state current	I_G=2×I_{GT}	di/dt	150			A/μs
Insulation voltage	A.C 50Hz(1s/1min)	V_{ISO}	3600/3000			V

Electrical Characteristics (Packaged into modules, unless otherwise specified, T_{CASE}=25)

Parameter	Test Conditions	Symbol	Values	Unit
Peak on-state voltage	I_T=750A t_P=380μs	V_{TM}	≤1.8	V
Threshold voltage	T_j=125	V_{TO}	≤0.85	V
Dynamic resistance				

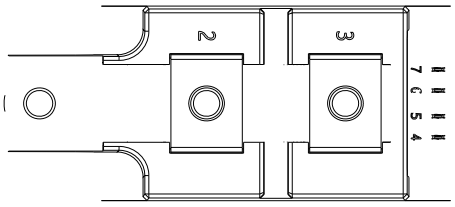
TELvity DBC as the insulation.

um welding technology, which provide high reliability.

Repetitive peak reverse current	$V_R=V_{RRM}$ $T_C=25$ $T_C=125$	 I_{RRM1} I_{RRM2}	 ≤100 ≤100	 μA mA
Triggering gate current	V_D=12V R_L=30Ω	I_{GT}	20-150	mA
Holding current	I_T=1A	I_H	≤300	mA
Latching current	$I_G=1.2I_{GT}$	I_L	≤400	mA
Triggering gate voltage	V_D=12V R_L=30Ω	V_{GT}	≤1.8	V
Non triggering gate voltage	$V_D=0.5V_{DRM}$ T_j=125	V_{GD}	≤0.25	V
Critical rate of rise of voltage	$V_D=2/3V_{DRM}$ T_j=125 Gate Open	dv/dt	≥1000	V/μs
Thermal resistance	Junction to case Case to heatsink	$R_{th(j-c)}$ $R_{th(c-s)}$	0.14 0.05	/W

Mechanical Characteristics

Module size	115mm×50mm
Module height	53mm
Terminal distance of (1) /(2) /(3)	42.5mm/35mm/23.5mm
Mounting torque(M5)	5±15%Nm
Terminal torque(M8)	9±15%Nm



Instructions and Precautions

1) There is no severe vibration and shock in operating environment, and there should be no impurity and atmosphere which may corrode metal and damage the insulation in the air-dielectric.

2) The operating condition of the product can't out of range of the above parameters.

3) When the product is installed on the radiator, the radiator's surface should be confirmed flat, smooth, wipe clean with alcohol, and coated evenly with a layer of thermal grease which thickness is moderate on the contact surface between product and radiator. When the module is fastened on the surface of the radiator, the M5 or M6 screwn mS p p adĩ anva ŕ a radi E a a Mr

FIG.3: Forward characteristics
(per thyristor or diode)

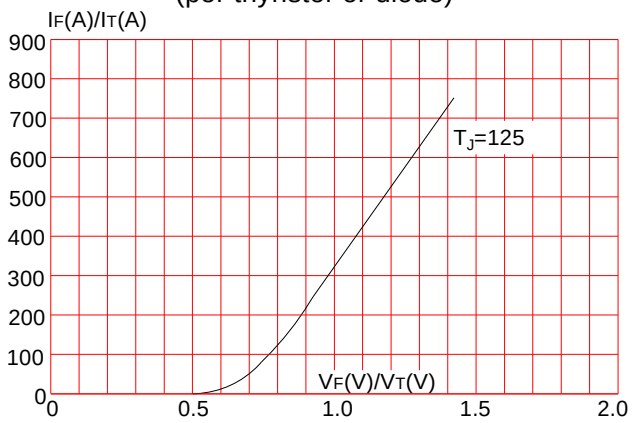


FIG.4: Relative variations of gate trigger current, holding current and latching current versus junction temperature