

Thyristor / DIODE Modules
TYPE: MFC55A-1600V
Features

- High Voltage
- Industrial Standard Package
- Thick Al metal die and double stick bonding
- Thick copper baseplate
- UL approved

Typical Applications

- DC motor control
- AC motor soft starters
- Temperature control
- Professional light dimming

Maximum Ratings

Symbol	Condition	Ratings	Unit
$I_{T(AV)}$ $I_{F(AV)}$	Single phase, half wave, 180° conduction, $T_c = 85\text{ °C}$	55	A
$I_{O(RMS)}$	Single phase, half wave, 180° conduction,	95	A
I_{TSM} I_{FSM}	$T_j = T_{jmax}$; $t = 10\text{ms}$	1250	A
I^2t	$T_j = T_{jmax}$; $t = 10\text{ms}$	8	kA^2S
V_{DRM} V_{RRM} V_{RSM}	$T_j = T_{jmax}$	1600 1600 1700	V
di/dt	$I_G = 500\text{mA}$, $t_r = 1\text{ }\mu\text{s}$, $T_j = 25\text{ °C}$	150	A/ μs
V_{INS}	A.C. 1minute	3000	V
T_j		-40 ~ + 125	°C
T_{stg}		-40 ~ + 125	°C
W	About	-	g

Electrical Characteristics

Symbol	Condition	Ratings	Unit
I_{DRM} / I_{RRM}	At V_{DRM} , Single phase, half wave; $T_j = T_{jmax}$	15	mA
V_{TM} V_{FM}	On-State Current 200A; $T_j = 25\text{ °C}$	1.65	V
$V_{T(TO)}$	$T_j = T_{jmax}$	0.9	V
r_t	$T_j = T_{jmax}$	3.5	$\text{m}\Omega$
t_{gd}	$T_j = 25\text{ °C}$	1	μs
t_q	$T_j = T_{jmax}$	80	μs
I_{GT} / V_{GT}	$T_j = 25\text{ °C}$	150/3.0	mA/V
V_{GD}	$V_D = 67\% V_{DRM}$; $T_j = T_{jmax}$	0.25	V
DV/DT	$V_D = 67\% V_{DRM}$; $T_j = T_{jmax}$	1000	V/ μs
I_H	$T_j = 25\text{ °C}$	150	mA
I_L	$T_j = 25\text{ °C}$	300	mA

T	Mounting torque case-heatsink; $\pm 10\%$ Mounting torque busbar-terminals; $\pm 10\%$	5 3	N.m
R _{th(j-c)}	Per Module	0.29	K/W
R _{th(c-s)}	Per Module	0.1	K/W

Outline Drawing

