

Feature

- This module is designed very compactly, Because diode Module and thyristor are put together.
- This module is also isolated type between electorode Terminal and mounting base.

I_D	75A
V_{RRM}	800/1600V
I_{FSM}	0.91/1.0 KA
I^2t	4150 A ² S

Typical application

- Inverter for AC or DC motor control
- Current stabilized power supply
- Switching power supply

● DIODE

■ Maximum Ratings

($T_J=25^\circ\text{C}$)

Symbol	Item	Ratings		Unit
		HDFA75BA80	HDFA75BA160	
V_{RRM}	Repetitive Peak Reverse Voltage	800	1600	V
V_{RSM}	Non-Repetitive Peak Reverse Voltage	960	1700	V

Symbol	Item	Conditions	Ratings	Unit
I_D	Output Current (D.C.)	Three phase full wave, $T_C=117^\circ\text{C}$	75	A
I_{FSM}	Surge forward current	50/60Hz, peak value, non-repetitive	910/1000	A
T_J	Operating Junction Temperature		-40 to +150	$^\circ\text{C}$
T_{stq}	Storage Temperature		-40 to +125	$^\circ\text{C}$
V_{iso}	Isolation Breakdown Voltage (R.M.S.)	R.M.S, $t=1\text{min}$, $I_{iso}: 1\text{mA}(\text{max})$	2500	V
F_M	Mounting (M5)		2.7	N-m
W_t	Mass		150	g

■ Electrical Characteristics

Symbol	Item	Conditions	Ratings	Unit
I_{RRM}	Repetitive Peak Reverse Current, max.	$T_J=150^\circ\text{C}$, $V_{RM}=V_{RRM}$	8	mA
V_{FM}	Forward Voltage Drop, max.	$T_J=25^\circ\text{C}$, $I_F=50\text{A}$	1.30	V
$R_{th(j-c)}$	Thermal Impedance, max.	Junction to Case (TOTAL)	0.25	$^\circ\text{C}/\text{W}$
$R_{th(c-f)}$	Thermal Impedance, max.	Case to Fin	0.10	$^\circ\text{C}/\text{W}$

● THYRISTOR
■ Maximum Ratings

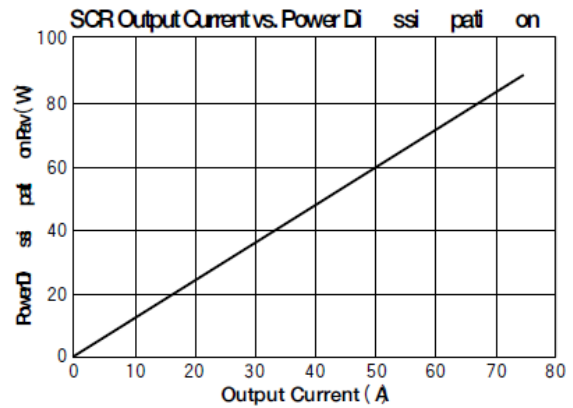
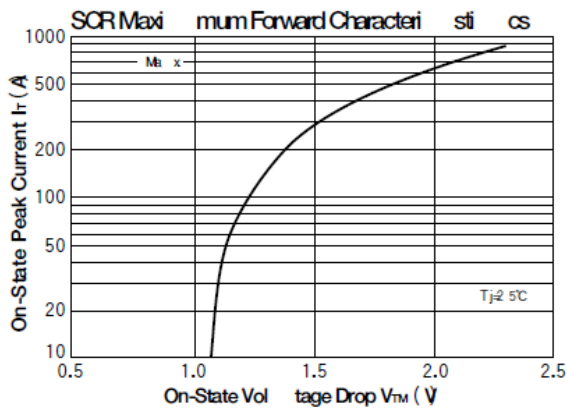
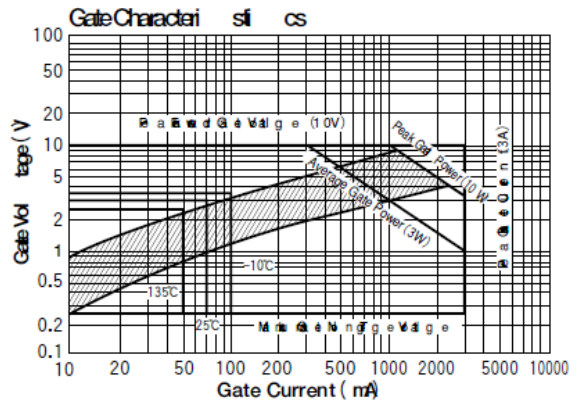
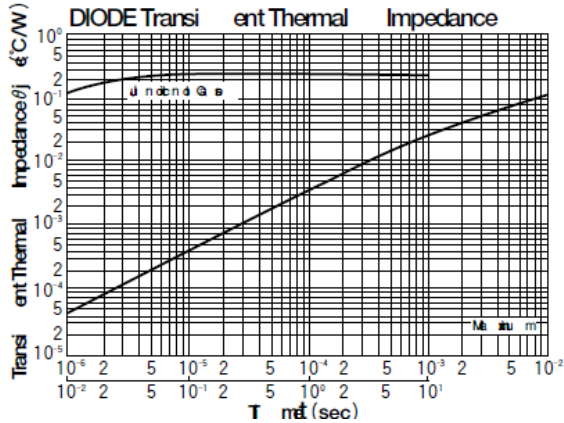
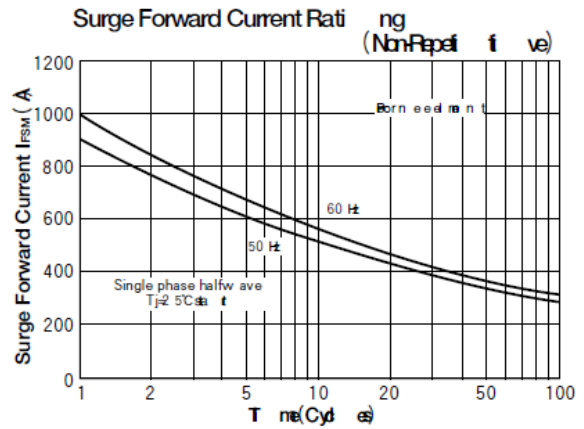
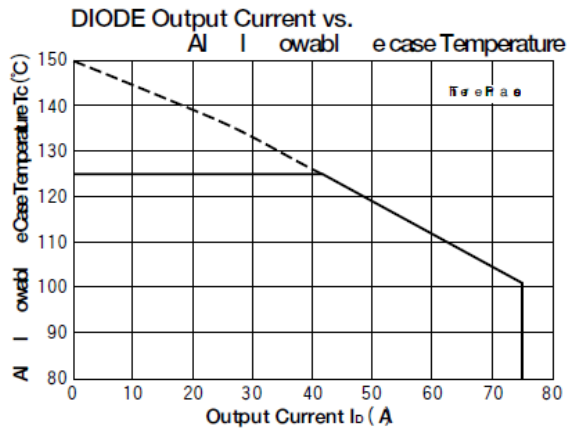
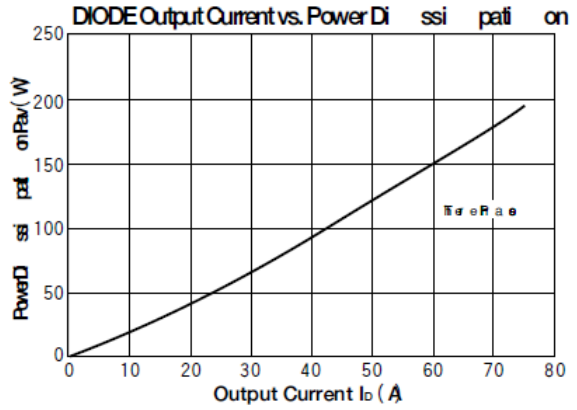
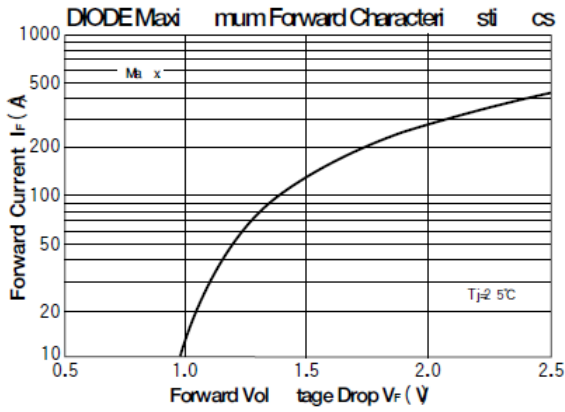
 (T_J = 25°C)

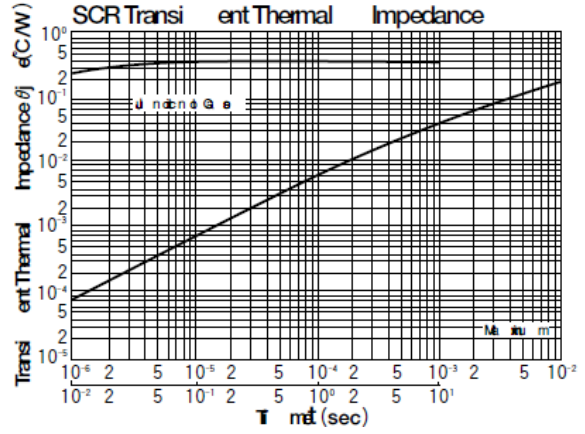
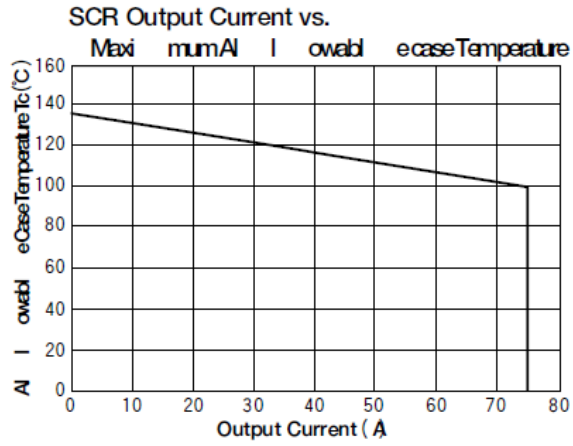
Symbol	Item	Ratings		Unit
		HDF A75BA80	HDF A75BA160	
V _{RRM}	Repetitive Peak Reverse Voltage	800	1600	V
V _{RSM}	Non-Repetitive Peak Reverse Voltage	960	1700	V
V _{DRM}	Repetitive Peak off-State Voltage	800	1600	V

Symbol	Item	Conditions	Ratings	Unit
I _{T(AV)}	Average On-State Current	Singl phase half wave.180° conduction, T _C =85°C	75	A
I _{TSM}	Surge On-State Current	peak value, non-repetitive, 50/60Hz	910/1000	A
I ² t	I ² t		4150	A ² S
di/dt	Critical Rate of Rise of On-State Current	I _G =100mA , V _D =1/2V _{DRM}	150	A/us
V _{iso}	Isolation Breakdown Voltage (R.M.S.)	R.M.S,t=1min,I _{iso} :1mA(max)	2500	V
T _J	Operating Junction Temperature		-40 to +135	°C
T _{stq}	Storage Temperature		-40 to +125	°C
F _M	Mounting (M5)		2.7	N-m
W _t	Mass		150	g

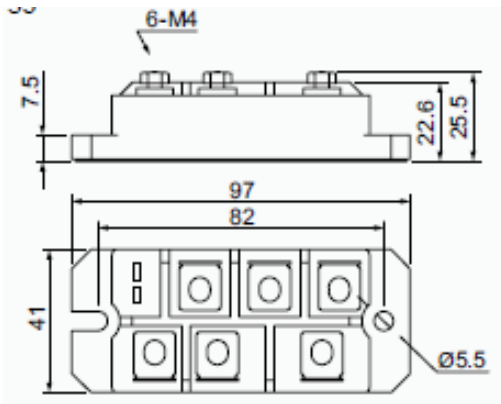
■ Electrical Characteristics

I _{DRM}	Repetitive Peak Off-State Current,max	T _J = 135°C, V _D = V _{DRM}	60	mA
I _{RSM}	Repetitive Peak Reverse Current,max.	T _J = 135°C, V _D = V _{RRM}	60	mA
V _{TM}	Peak On-State Voltage,max	T _J = 125°C, I _{TM} = 50A	1.20	V
I _{GT}	Gate Trigger Current,max	V _D = 6V, I _A = 1A	70	mA
V _{GT}	Gate Trigger Voltage,max.		3	V
dv/dt	Critical Rate of Rise of Off-State Voltage,min.	T _J = 125°C, V _{DM} = 0.67V _{DRM}	500	V/us
R _{th(j-c)}	Thermal Impedance, max.	Junction to Case	0.40	°C/W
R _{th(c-f)}	Thermal Impedance, max.	Case to Fin	0.10	°C/W





Outline:



Circuit Drawing:

