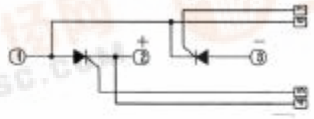
SanRex

THYRISTOR / DIODE (ISOLATED TYPE)

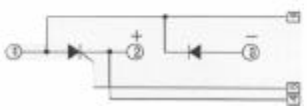
PK(PD)160FG40/80/120/160

$I_{T(AV)}$ = 160A, V_{RRM} = 400 - 1600V

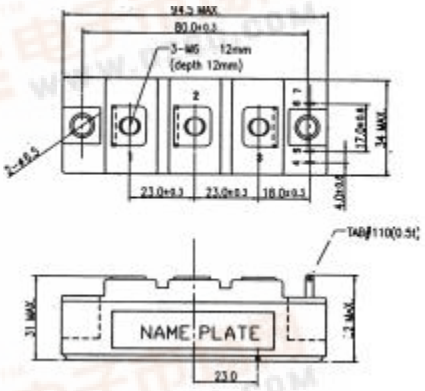
SanRex Thyristor/Thyristor modules (**PK series**), Thyristor/ Diode modules (**PD series**) are designed for general purpose high voltage applications such as motor controls, temperature controls, lighting controls and UPS.



PK series



PD series



Features

* Glass-passivated junctions Features
* High Surge Current
* Low loss (V_{TM}=1.5V)

Typical Applications

* Motor Controls
* Temperature Controls
* Lighting Controls

< Maximum Ratings > (Tj = 25°C unless otherwise noted)

Symbol	Item		Ratings				Unit
			PK160FG40	PK160FG80	PK160FG120	PK160FG160	
V_{RRM}	Repetitive Peak Reverse Voltage		400	800	1200	1600	V
V_{RSM}	Non-Repetitive Peak Reverse Voltage		480	960	1300	1700	V
V_{DRM}	Repetitive Peak Off-state Voltage		400	800	1200	1600	V
$I_{T(AV)}$	Average On-state Current		T_C = 84°C			160	A
$I_{T(RMS)}$	R.M.S. On-state Current		T_C = 84°C			251	A
I_{TSM}	Surge On-state Current		1/2 cycle, 50Hz/60Hz, Peak value, Non-repetitive			5000/5400	A
I^2t	I^2t (for fusing)		Value for one cycle surge current			125000	A^2s
P_{GM}	Peak Gate Power Dissipation					10	W
$P_{G(AV)}$	Average Gate Power Dissipation					3	W
I_{FGM}	Peak Gate Current					3	A
V_{FGM}	Peak Gate Voltage (Forward)					10	V
V_{RGM}	Peak Gate Voltage (Reverse)					5	V
di/dt	Critical Rate of Rise of On-state Current		I_G=100mA, V_D=1/2V_{DRM}, dig/dt=0.1A/ Fs			200	A/Fs
V_{ISO}	Isolation Breakdown Voltage		A.C. 1 minute			2500	
Tj	Operating Junction Temperature					-40 to +125	°C
T_{stg}	Storage Temperature					-40 to +125	°C
	Mounting Torque	Mounting M6	Recommended Value 2.5 to 3.9			4.7	N*m
		Terminals M6	Recommended Value 2.5 to 3.9			4.7	
	Mass		Typical Value			210	g

< Electrical Characteristics > (Tj = 25°C unless otherwise noted)

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I_{DRM}	Repetitive Peak Off-state Current	T_j = 125°C, V_D = V_{DRM}			35	mA
I_{RRM}	Repetitive Peak Reverse Current	T_j = 125°C, V_R = V_{RRM}			35	mA
V_{TM}	Peak On-State Voltage	I_T = 480A			1.5	V
I_{GT}	Gate Trigger Current	VD=6V, IT=1A			100	mA
V_{GT}	Gate Trigger Voltage	VD=6V, IT=1A			3	V
V_{GD}	Non-Trigger Gate Voltage	Tj = 125°C, V_D=1/2V_{DRM}	0.25			V
dv/dt	Critical Rate of Rise of Off-state Voltage	Tj = 125°C, V_D=2/3V_{DRM}	500			V/Fs
Rth(j-c)	Thermal Resistance	Junction to case			0.18	°C/W