

THYRISTOR MODULE

100A / 400V

PFT1014N

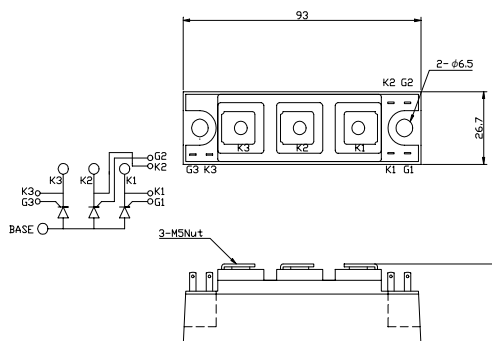
FEATURES

- * 3 Phase Anode Common
Half Bridge Circuit
- * High Surge Capability
- * UL Recognized, File No. E187184

TYPICAL APPLICATIONS

- * Rectified For General Use

OUTLINE DRAWING



Maximum Ratings

Approx Net Weight:150g

Parameter	Symbol	Grade	Unit
		PFT1014N	
Repetitive Peak Off-State Voltage	V_{DRM}	400	V
Non Repetitive Peak Off-State Voltage	V_{DSM}	500	
Repetitive Peak Reverse Voltage	V_{RRM}	400	V
Non Repetitive Peak Reverse Voltage	V_{RSM}	500	

Parameter			Conditions		Max Rated Value	Unit
Average Rectified Output Current		I _{O(AV)}	50Hz Half Sine Wave condition T _C =116°C		100	A
RMS On-State Current		I _{T(RMS)}			157	A
Surge On-State Current		I _{TSM}	50 Hz Half Sine Wave,1Pulse, Non-Repetitive		3000	A
I Squared t		I ² t	2msec to 10msec		45000	A ² s
Peak Gate Power		P _{GM}			5	W
Average Gate Power		P _{G(AV)}			1	W
Peak Gate Current		I _{GM}			2	A
Peak Gate Voltage		V _{GM}			10	V
Peak Gate Reverse Voltage		V _{RGM}			5	V
Operating JunctionTemperature Range		T _{jw}			-40 to +150	°C
Storage Temperature Range		T _{stg}			-40 to +125	°C
Mounting torque	Case mounting	F _{tor}	Greased	M6 Screw	2.4 to 3.5	N.m
	Terminals		M5 Screw		2.4 to 2.8	

Value per 1 Arm

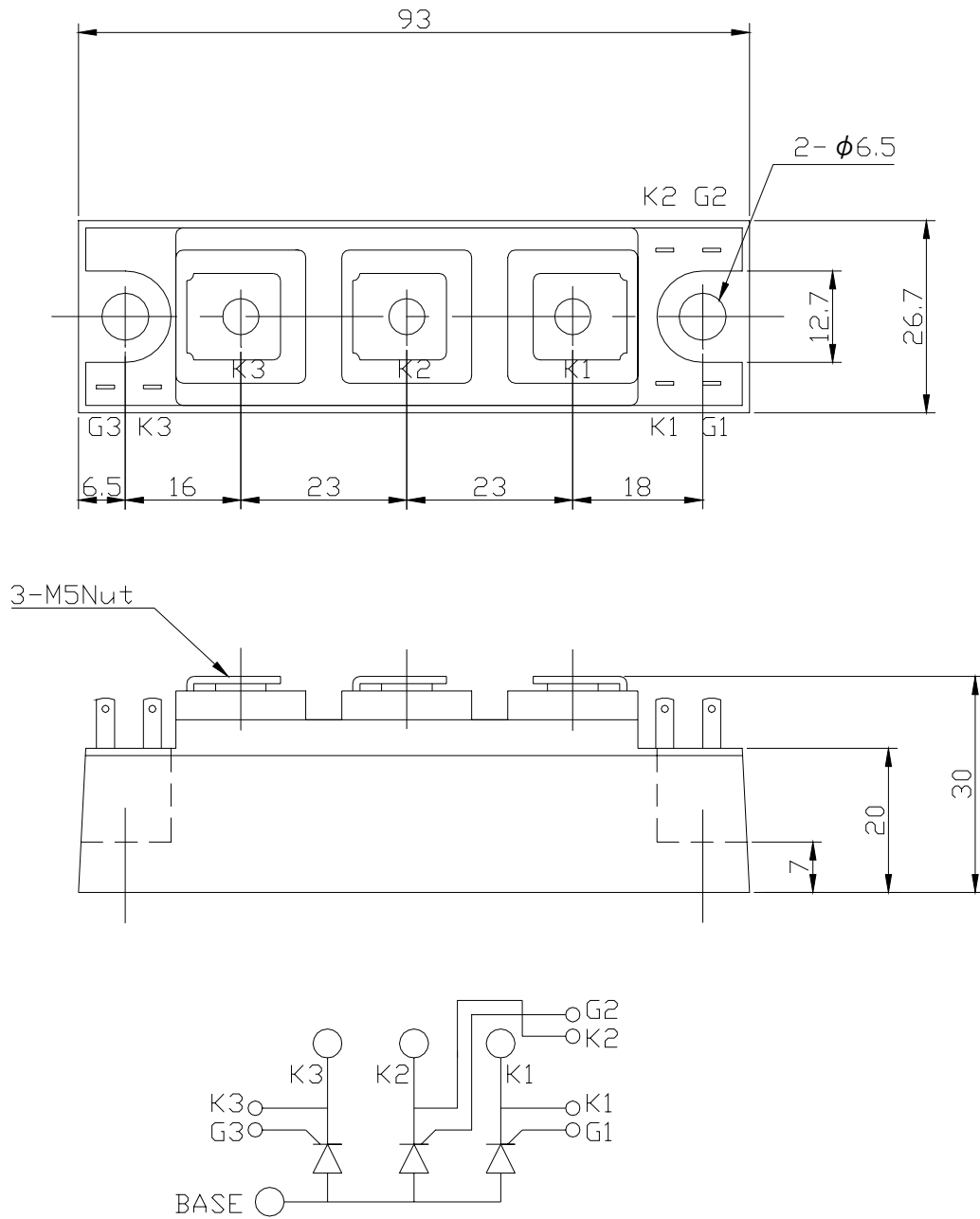
Electrical • Thermal Characteristics

Characteristics	Symbol	Test Conditions	Maximum Value.			Unit
			Min.	Typ.	Max.	
Peak Off-State Current	I_{DM}	$V_{DM} = V_{DRM}, T_j = 150^{\circ}C$			20	mA
Peak Reverse Current	I_{RM}	$V_{RM} = V_{RRM}, T_j = 150^{\circ}C$			20	mA
Peak Forward Voltage	V_{TM}	$I_{TM} = 300A, T_j = 25^{\circ}C$			1.20	V
Gate Current to Trigger	I_{GT}	$V_D = 6V, I_T = 1A$	$T_j = -40^{\circ}C$		300	mA
			$T_j = 25^{\circ}C$		150	
			$T_j = 125^{\circ}C$		60	
Gate Voltage to Trigger	V_{GT}	$V_D = 6V, I_T = 1A$	$T_j = -40^{\circ}C$		5.0	V
			$T_j = 25^{\circ}C$		3.0	
			$T_j = 125^{\circ}C$		1.5	
Gate Non-Trigger Voltage	V_{GD}	$V_D = 2/3 V_{DRM}, T_j = 125^{\circ}C$	0.25			V
Latching Current	I_L	$T_j = 25^{\circ}C$		100		mA
Holding Current	I_H	$T_j = 25^{\circ}C$		60		mA
Thermal Resistance *1	$R_{th(j-c)}$	Junction to Case			0.1	$^{\circ}C/W$

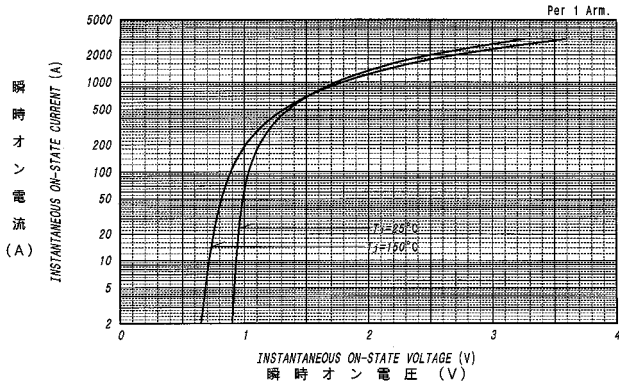
Value Per 1Arm

*1:Value Per Module

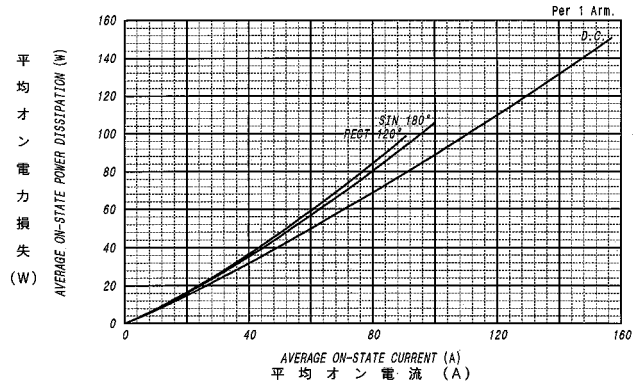
PFT1014N OUTLINE DRAWING (Dimensions in mm)



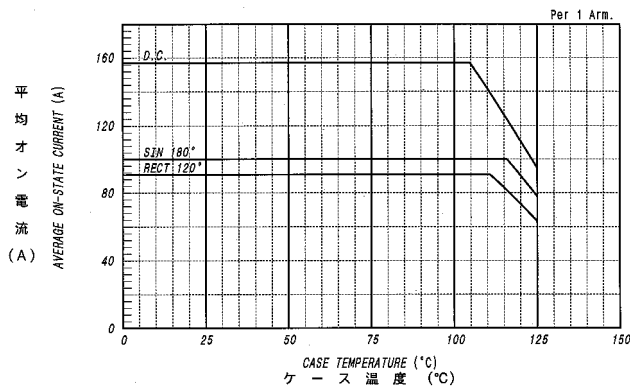
オン電圧特性
ON-STATE CURRENT VS. VOLTAGE



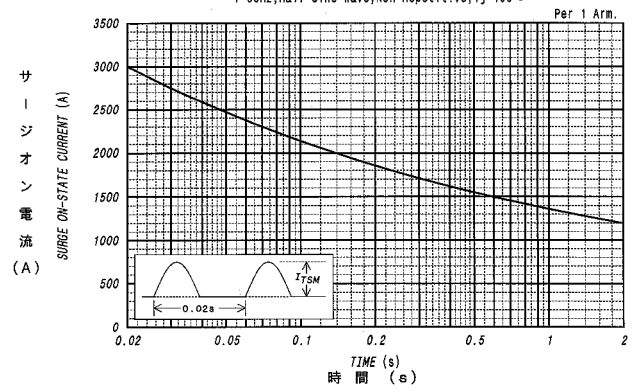
平均オン電力損失特性
AVERAGE ON-STATE POWER DISSIPATION



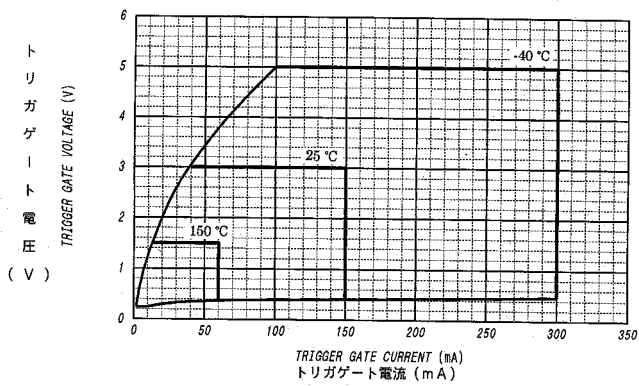
平均オン電流 - ケース温度定格
AVERAGE ON-STATE CURRENT VS. CASE TEMPERATURE



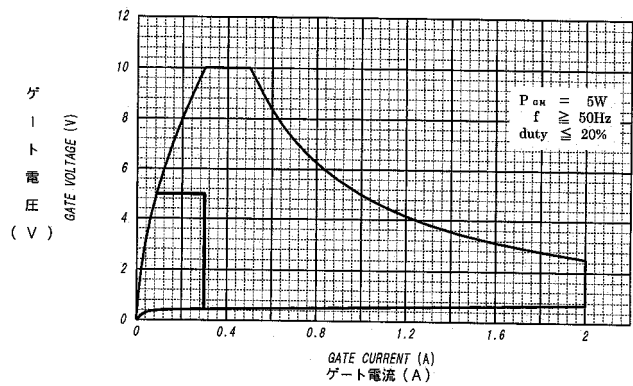
サージオン電流定格
SURGE CURRENT RATINGS



ゲート特性
GATE CHARACTERISTICS



ゲート定格
GATE RATINGS



過渡熱抵抗特性
MAXIMUM TRANSIENT THERMAL IMPEDANCE

