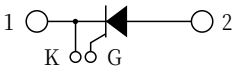
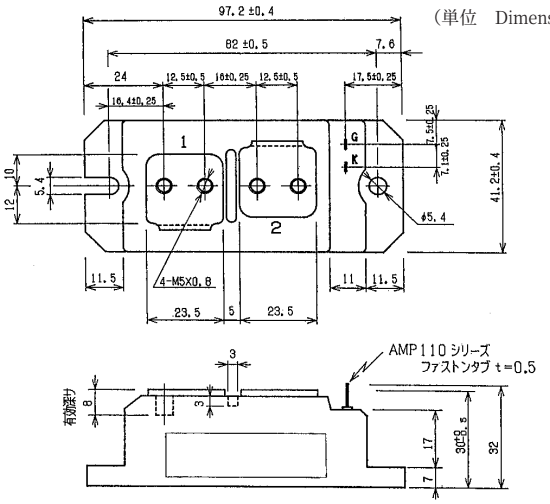
THYRISTOR | 250A Avg 1200～1600 Volts | PHT25012 PHT25016

■回路図　CIRCUIT



■外形寸法図　OUTLINE DRAWING

（単位　Dimension：mm）



（注）アノードとカソード間の空間距離は５mmであり、UL1557、400V系にて使用される場合、十分な空間距離を満足させてください。
The striking distance between the anode and the cathode of this module is 5mm, filling with UL1557, but when used by the system of 400V AC, take an enough striking distance and wire.

■最大定格　Maximum Ratings

項　目 Parameter	記号 Symbol	耐圧クラス　Grade PHT25012	PHT25016	単位 Unit
くり返しピークオフ電圧 Repetitive Peak Off-State Voltage	V_{DRM}	1200	1600	V
非くり返しピークオフ電圧 Non Repetitive Peak Off-State Voltage	V_{DSM}	1300	1700	V
くり返しピーク逆電圧 Repetitive Peak Reverse Voltage	V_{RRM}	1200	1600	V
非くり返しピーク逆電圧 Non Repetitive Peak Reverse Voltage	V_{RSM}	1300	1700	V

項　目 Parameter		記号 Symbol	条　件 Conditions		定格値 Max. Rated Value	単位 Unit
平均整流電流 Average Rectified Output Current		$I_{0(AV)}$	商用周波数　180°通電 Half Sine Wave	T_c=65℃	250	A
実効オン電流 RMS On-State Current		$I_{T(RMS)}$			390	A
サージオン電流 Surge On-State Current		I_{TSM}	50Hz正弦半波，１サイクル，非くり返し Half Sine Wave, 1Pulse, Non-Repetitive		4000	A
電流二乗時間積 I Squared t		I^2t	２～10ms		80000	A^2s
臨界オン電流上昇率 Critical Rate of Rise of Turned-On Current		di/dt	V_D=2/3V_{DRM}，I_{TM}=2･I_O，T_j=125℃ I_G=300mA，di_G/dt=0.2A/μs		100	A/μs
ピークゲート電力損失 Peak Gate Power		P_{GM}			5	W
平均ゲート電力損失 Average Gate Power		$P_{G(AV)}$			1	W
ピークゲート電流 Peak Gate Current		I_{GM}			2	A
ピークゲート電圧 Peak Gate Voltage		V_{GM}			10	V
ピークゲート逆電圧 Peak Gate Reverse Voltage		V_{RGM}			5	V
動作接合温度範囲 Operating Junction Temperature Range		T_{jw}			－40～＋125	℃
保存温度範囲 Storage Temperature Range		T_{stg}			－40～＋125	℃
絶縁耐圧 Isolation Voltage		V_{iso}	端子ーベース間，AC１分間 Terminal to Base, AC 1 min.		2500	V
締付トルク Mounting Torque	ベース部 Mounting	F	サーマルコンパウンド塗布 Greased	M5	2.4～2.8	N･m
	主端子部 Terminal			M5	2.4～2.8	N･m

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■電気的特性　Electrical Characteristics

項　目 Parameter	記号 Symbol	条　件 Conditions		特性値（最大）Maximum Value 最小 Min.	標準 Typ.	最大 Max.	単位 Unit
ピークオフ電流 Peak Off-State Current	I_{DM}	T_j=125°C, V_{DM}=V_{DRM}				80	mA
ピーク逆電流 Peak Reverse Current	I_{RM}	T_j=125°C, V_{RM}=V_{RRM}				80	mA
ピークオン電圧 Peak On-State Voltage	V_{TM}	T_j=25°C, I_{TM}=800A				1.38	V
トリガゲート電流 Gate Current to Trigger	I_{GT}	V_D=6V, I_T=1A	T_j=−40°C			300	mA
			T_j= 25°C			150	mA
			T_j= 125°C			80	mA
トリガゲート電圧 Gate Voltage to Trigger	V_{GT}	V_D=6V, I_T=1A	T_j=−40°C			5	V
			T_j= 25°C			3	V
			T_j= 125°C			2	V
非トリガゲート電圧 Gate Non-Trigger Voltage	V_{GD}	T_j=125°C, V_D=2/3V_{DRM}		0.25			V
臨界オフ電圧上昇率 Critical Rate of Rise of Off-State Voltage	dv/dt	T_j=125°C, V_D=2/3V_{DRM}		500			V/μs
ターンオフ時間 Turn-Off Time	t_q	T_j=125°C, I_{TM}=I_O, V_D=2/3V_{DRM} dv/dt=20V/μs, V_R=100V, −di/dt=20A/μs			200		μs
ターンオン時間 Turn-On Time	t_{gt}	T_j=25°C, V_D=2/3V_{DRM} I_G=300mA, di_G/dt=0.2A/μs			6		μs
遅れ時間 Delay Time	t_d				2		μs
立上がり時間 Rise Time	t_r				4		μs
ラッチング電流 Latching Current	I_L	T_j=25°C			150		mA
保持電流 Holding Current	I_H	T_j=25°C			100		mA
熱抵抗 Thermal Resistance	$R_{th(j-c)}$	接合部−ケース間 Junction to Case				0.18	°C/W
接触熱抵抗 Thermal Resistance	$R_{th(c-f)}$	ケース−フィン間，サーマルコンパウンド塗布 Case to Fin, Greased				0.1	°C/W

質量…約250g
Approximate Weight

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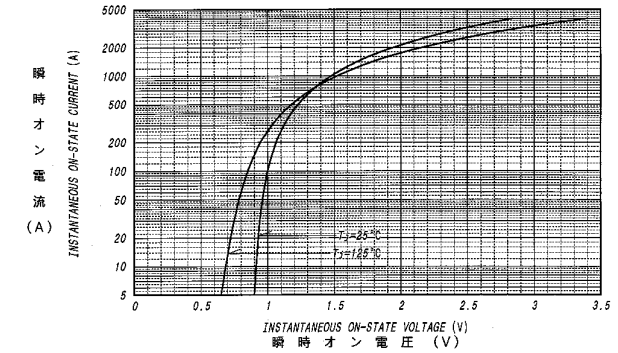
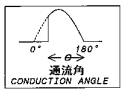
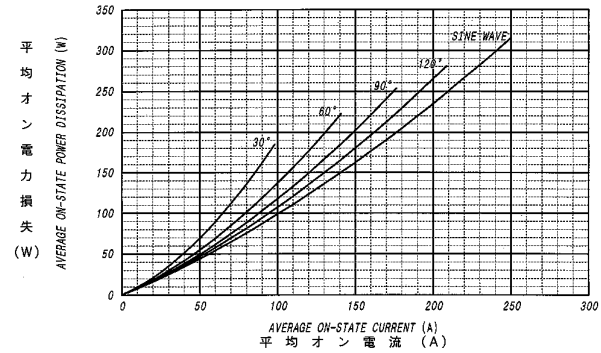
■定格・特性曲線

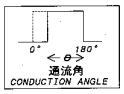
オン電圧特性
ON-STATE CURRENT VS. VOLTAGE



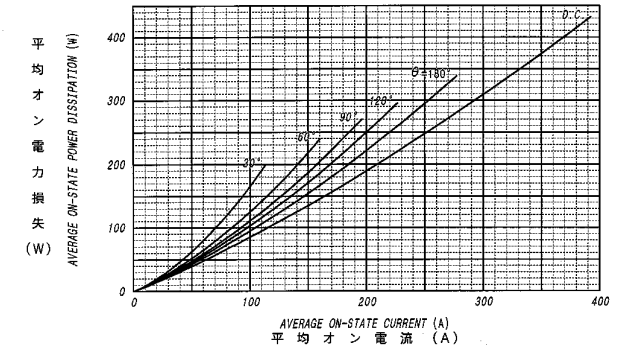


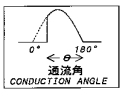
平均オン電力損失特性
AVERAGE ON-STATE POWER DISSIPATION
for SINUSOIDAL CURRENT WAVEFORM



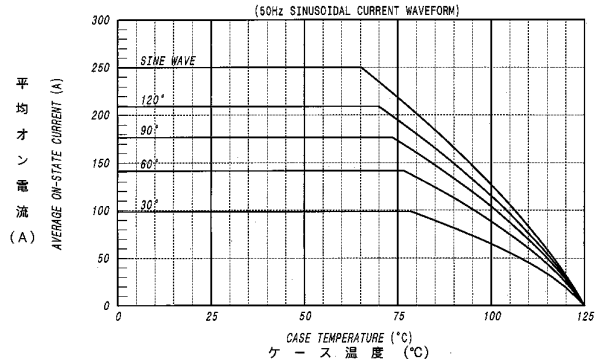


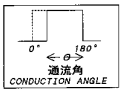
平均オン電力損失特性
AVERAGE ON-STATE POWER DISSIPATION
for RECTANGULAR CURRENT WAVEFORM



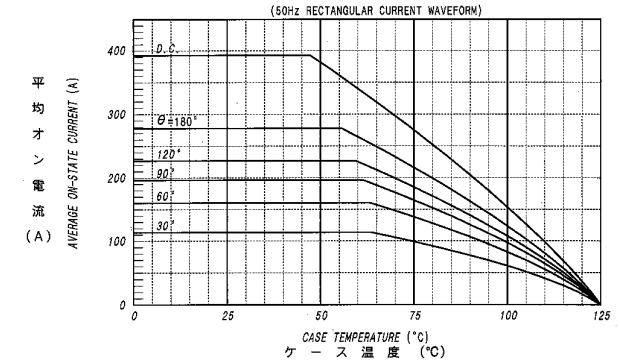


平均オン電流－ケース温度定格
AVERAGE ON-STATE CURRENT VS. CASE TEMPERATURE

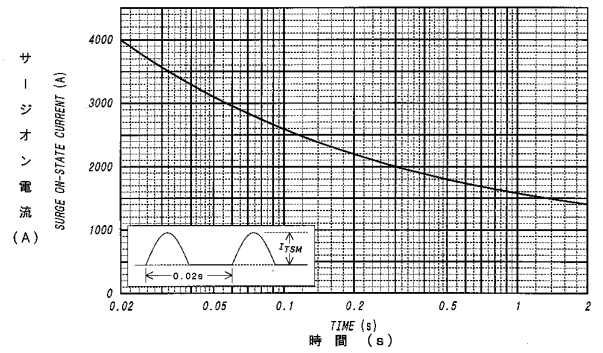




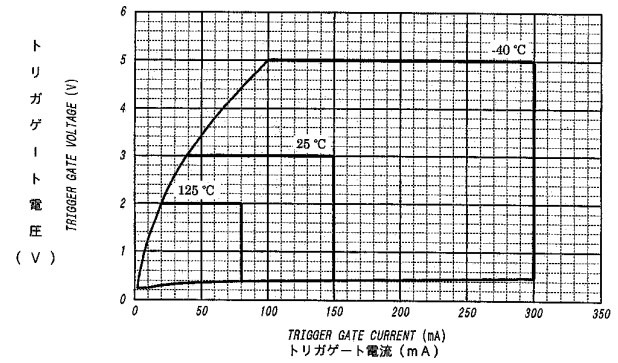
平均オン電流－ケース温度定格
AVERAGE ON-STATE CURRENT VS. CASE TEMPERATURE



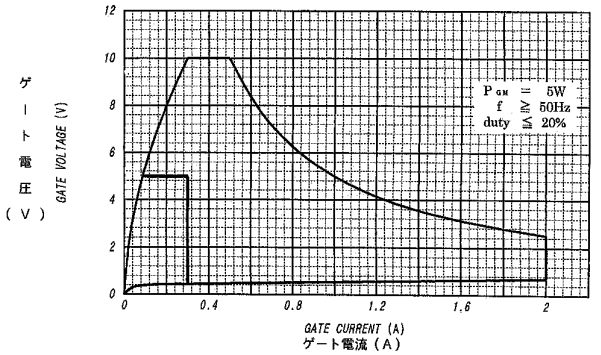
サージオン電流定格
SURGE CURRENT RATINGS
f=50Hz,Half Sine Wave,Non-Repetitive,Tj=125℃



ゲート特性
GATE CHARACTERISTCS



ゲート定格
GATE RATINGS



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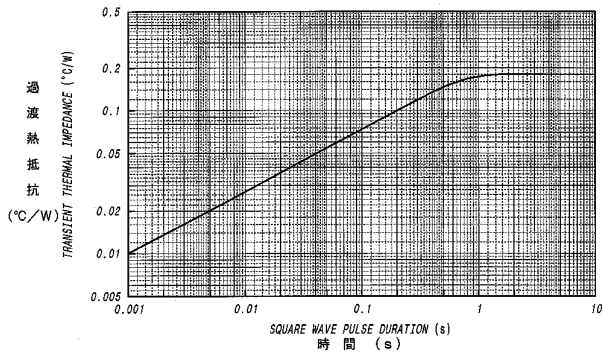
過渡熱抵抗特性
MAXIMUM TRANSIENT THERMAL IMPEDANCE
Junction to Case



サイリスタモジュール

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