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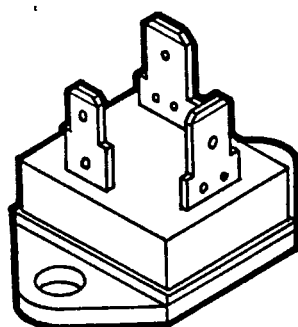
T-25-15

T-25-17

SanRex®

POWER SEMICONDUCTORS

NEW



ISOLATED TRIAC MOLD TYPE TG SERIES

- TO-3 Isolated Mounting. 2.5kV RMS Isolation
- Voltage Range Up to 600V
- High Commutating dv/dt

TG-F SERIES

- Super High Surge Current Capability
- Economical Low On-State Voltage

Parts Number Assignment

TG 25 F 40

Type Code

C	Standard Type Gate Terminal Thickness 0.5mm (0.020in)
E	Standard Type Gate Terminal Thickness 0.8mm (0.031in)
F	High Quality Type Gate Terminal Thickness 0.8mm (0.031in)

RMS ON-STATE CURRENT

TG Series

Voltage Code	V _{DRM} [V]
20	200
30	300
40	400
50	500
60	600



SANSHA ELECTRIC MFG. CO., LTD.

OSAKA JAPAN

8002-5838

Editor *mf*

SanRex. POWER SEMICONDUCTORS

T-25-17

■ MAXIMUM RATINGS

Specifications	Unit	TG16C TG16E	TG25C TG25E
V_{DRM} Repetitive Peak Voltage Range	V	200~600	200~600
$I_{T(RMS)}$ RMS On-State Current	A	16 $T_c=83^\circ\text{C}$	25 $T_c=74^\circ\text{C}$
I_{TSM} Surge On-State Current	A	140/160	220/250
I^2t I^2t for Fusing	A^2S	106	260
P_{GM} Peak Gate Power Dissipation	W	10	10
$P_{G(AV)}$ Average Gate Dissipation	W	1	1
I_{GM} Peak Gate Current	A	3	3
V_{GM} Peak Gate Voltage	V	10	10
di/dt Critical Rate of Current Rise	$\text{A}/\mu\text{S}$	50	50
T_j Operating Junction Temperature	$^\circ\text{C}$	-40 +125	-40 +125
T_{sig} Storage Temperature	$^\circ\text{C}$	-40 +125	-40 +125
V_{ISO} Isolation Voltage (RMS)	V	2,500	2,500
R_{ISO} Isolation Resistance	$\text{M}\Omega$	1,000	1,000
Mounting Torque	$\text{kgf}\cdot\text{cm}$	12	12
Weight	g	27	27

■ ELECTRICAL CHARACTERISTICS

I_{DRM} Max. Leakage Current		mA	3	5
V_{TM} Max. On-State Voltage		V	1.5	1.4
I_{GT} Max. Required Gate Current	1: I_{GT1}^+	mA	50	50
	2: I_{GT1}^-	mA	50	50
	3: I_{GT3}^+	mA	—	—
	4: I_{GT3}^-	mA	50	50
V_{GT} Max. Required Gate Voltage	1: V_{GT1}^+	V	3	3
	2: V_{GT1}^-	V	3	3
	3: V_{GT3}^+	V	—	—
	4: V_{GT3}^-	V	3	3
V_{GD} Min. Non-Trigger Gate Voltage		V	0.2	0.2
t_{gt} Max. Turn On Time		μS	10	10
dv/dt Min. Critical Rate of Voltage Rise		$\text{V}/\mu\text{S}$	50	50
$[dv/dt]_c$ Min. Commutating dv/dt		$\text{V}/\mu\text{S}$	6	6
I_H Typ. Holding Current		mA	30	30
R_{th} Max. Thermal Resistance		$^\circ\text{C}/\text{W}$	2.0	1.6



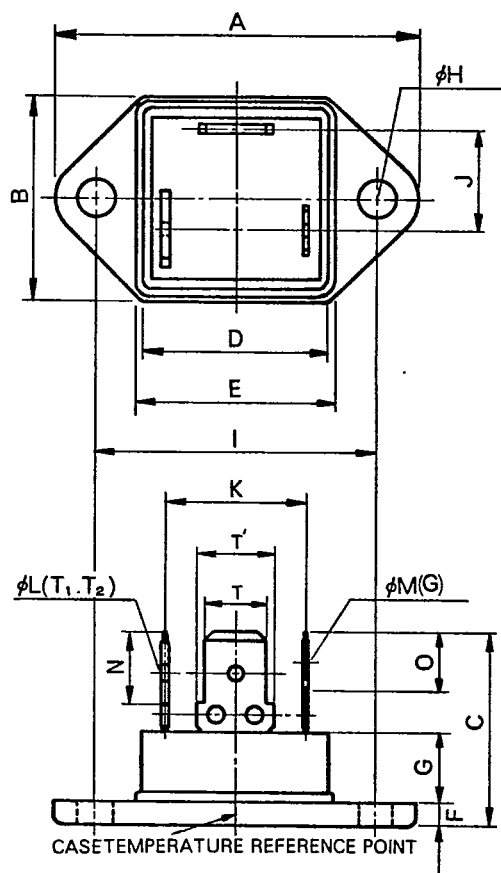
SanRex. POWER SEMICONDUCTORS

T-25-17

TG25F	TG35C TG35E	TG35F	Conditions
400~600	200~600	400~600	
25 T _c =80°C	35 T _c =58°C	35 T _c =67°C	Full cycle current
270/300	300/330	310/340	Non-repetitive, One cycle 50/60Hz
360	450	485	t=2 to 10 msec.
10	10	10	
1	1	1	
3	3	3	
10	10	10	
50	50	50	T _j =25°C, I _G =100mA, V _D =1/2V _{DRM} , di _G /dt=1A/μS
-40 +125	-40 +125	-40 +125	
-40 +125	-40 +125	-40 +125	
2,500	2,500	2,500	AC, 1 minute
1,000	1,000	1,000	DC 1,000 V, 5 sec.
12	12	12	Recommended 10 kgf·cm (9 lb·in)
27	27	27	

3	5	3	T _j =125°C, at V _{DRM}
1.35	1.4	1.38	T _j =25°C, I _T =1.4 I _{T(RMS)}
50	50	50	T _j =25°C, I _T =1A, V _D =6V
50	50	50	
—	—	—	
50	50	50	
2.5	3	2.5	T _j =25°C, I _T =1A, V _D =6V
2.5	3	2.5	
—	—	—	
2.5	3	2.5	
0.2	0.2	0.2	T _j =125°C, V _D =1/2V _{DRM}
10	10	10	T _j =25°C, I _T Rated, I _G =100mA, V _D =1/2V _{DRM}
100	20	100	T _j =125°C, V _D =2/3V _{DRM} , Exponential wave
10	3	10	[di/dt] _C = $\frac{8(TG16)}{15(TG25,35)}$ A/mS, V _D =2/3V _{DRM}
30	30	30	T _j =25°C
1.5	1.5	1.5	Junction to case





T₁ : TAB250(T=6.35 (0.250), T'=8.25 (0.325), t=0.8 (0.031))
 T₂ : TAB250(T=6.35 (0.250), T'=8.25 (0.325), t=0.8 (0.031))
 G(Ctype) : TAB187(T=4.75 (0.187), T'=5.7 (0.224), t=0.5 (0.020))
 G(E,Ftype) : TAB187(T=4.75 (0.187), T'=5.7 (0.224), t=0.8 (0.031))
 mm (inch)

SYMBOL	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
A	—	1.543	—	39.20
B	—	0.906	—	23.00
C	—	0.886	—	22.50
D	—	0.791	—	20.10
E	—	0.850	—	21.60
F	0.091	0.114	2.30	2.90
G	—	0.323	—	8.20
φH	0.161	0.169	4.10	4.30

SYMBOL	INCHES		MILLIMETERS	
	MIN.	MAX.	MIN.	MAX.
I	1.177	1.185	29.90	30.10
J	0.415	0.427	10.55	10.85
K	0.545	0.557	13.85	14.15
φL	0.065	0.087	1.65	2.20
φM	0.051	0.062	1.30	1.57
N	0.307	0.319	7.80	8.10
O	0.244	0.256	6.20	6.50



SANSHA ELECTRIC MFG. CO., LTD.

SANREX CORPORATION

1615, Northern Boulevard, Manhasset, NY 11030,



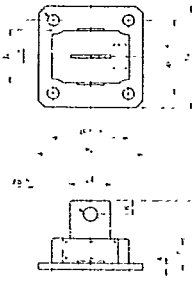
T-91-20

Technical drawings of vacuum furnace components, numbered 1 through 19. The drawings include various views (top, side, cross-section) and dimensions for parts such as heaters, thermocouples, and furnace chambers. Key components labeled include M8P1.0, M8P1.25, M12P1.5, M24P1.5, and various heater types like M5x11, M5x14, and M5x17. Dimensions are given in millimeters and inches.

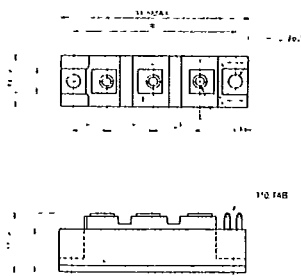
SanRex®**DIMENSIONS****DIMENSIONS**

(m/m)

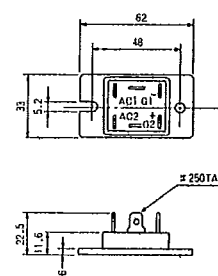
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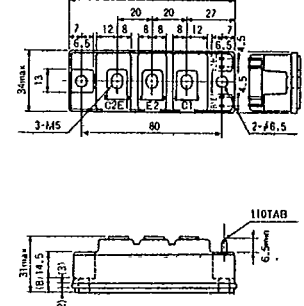
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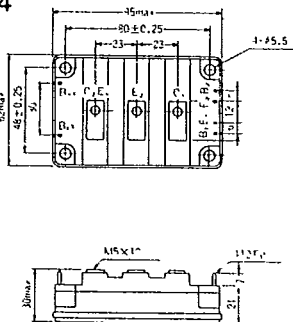
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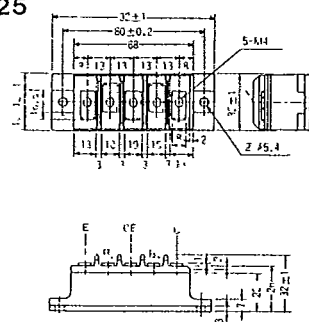
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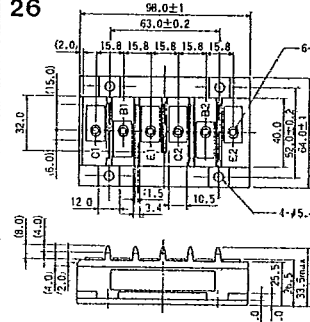
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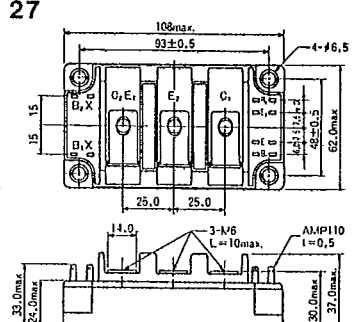
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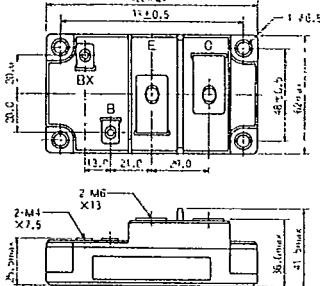
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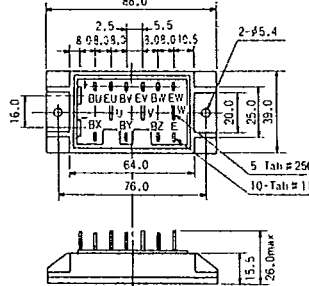
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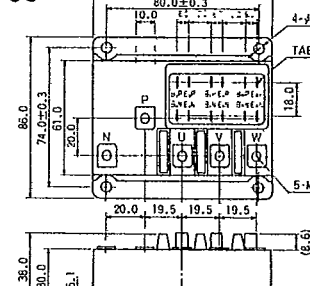
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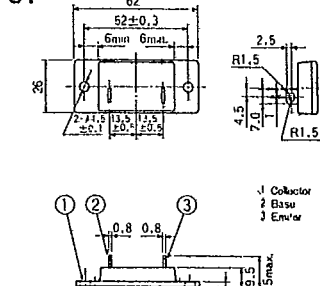
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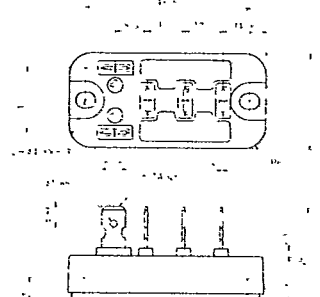
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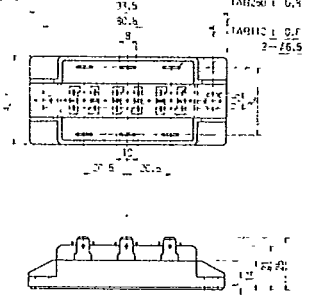
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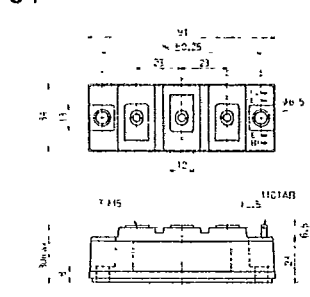
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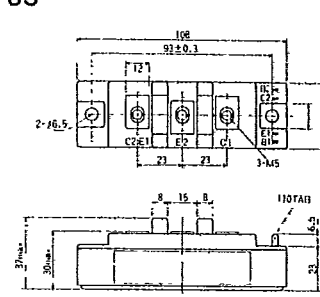
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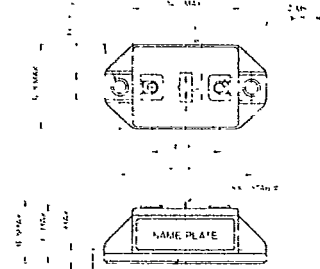
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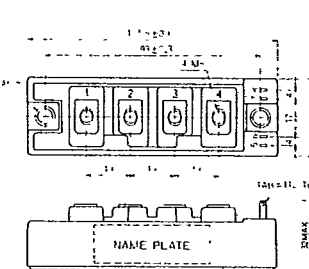
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