**Features:**

Thyristor for line frequency
Planar passivated chip
Long-term stability

Typical Applications:

Softstart AC motor control
DC Motor control
Power converter
AC power control

SYMBOL	CHARACTERISTIC	TEST CONDITIONS		T _J (°C)	VALUE			UNIT
					Min	Type	Max	
I _{T(RMS)}	RMS on-state current	180 half sine wave 50Hz	T _C =115°C	140			90	A
V _{DRM} V _{RRM}	Repetitive peak off-state voltage Repetitive peak reverse voltage	tp=10ms		25			1600	V
I _{DRM} I _{RRM}	Repetitive peak off-state current Repetitive peak reverse current	at V _{DRM} /V _{RRM}		25			200	μA
				140			15	mA
I _{TSM}	Surge on-state current	10ms half sine wave		25			1.40	kA
I ² t	I ² t value for fusing			25			9.80	kA ² s
I _{TSM}	Surge on-state current			140			1.26	kA
I ² t	I ² t value for fusing			140			7.94	kA ² s
I _{TSM}	Surge on-state current	8.3ms half sine wave		25			1.49	kA
I ² t	I ² t value for fusing			25			9.24	kA ² s
I _{TSM}	Surge on-state current			140			1.34	kA
I ² t	I ² t value for fusing			140			7.5	kA ² s
V _{TM}	Peak on-state voltage	I _{TM} =120A		25			1.50	V
di/dt	Critical rate of rise of on-state current	I _G =2*I _{GT}		140			150	A/μs
dv/dt	Critical rate of rise of off-state voltage	V=2/3V _{DRM} Gate Open		140			1000	V/μs
I _L	Latching current	I _G =1.2 I _{GT}		25			450	mA
I _{GT}	Gate trigger current	V _D =12V R _L =33 Ω		25	30		150	mA
V _{GT}	Gate trigger voltage			25			2.5	V
I _H	Holding current	I _T =1.0A		25			200	mA
V _{GD}	Non-trigger gate voltage	V _D =V _{DRM} R _L =3.3k Ω		140			0.2	V
P _{G(AV)}	Average gate power dissipation						0.5	W
P _{GM}	Peak gate power			140			5	W
R _{th(j-c)}	Thermal resistance Junction to case						0.32	C/W
R _{th(c-h)}	Thermal resistance case to heatsink						0.15	C/W

T_{stg}	Storage junction temperature range		-40		140	C
T_{vj}	Virtual junction temperature		-40		140	C
T_{op}	Operation temperature		-40		125	C
Outline	TO-247P					

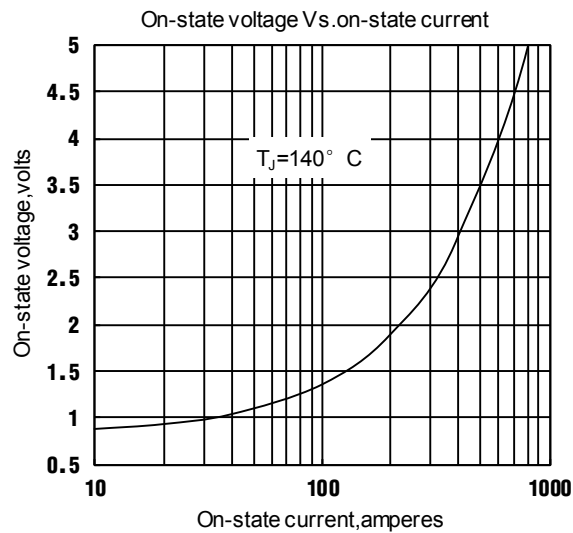


Fig.1

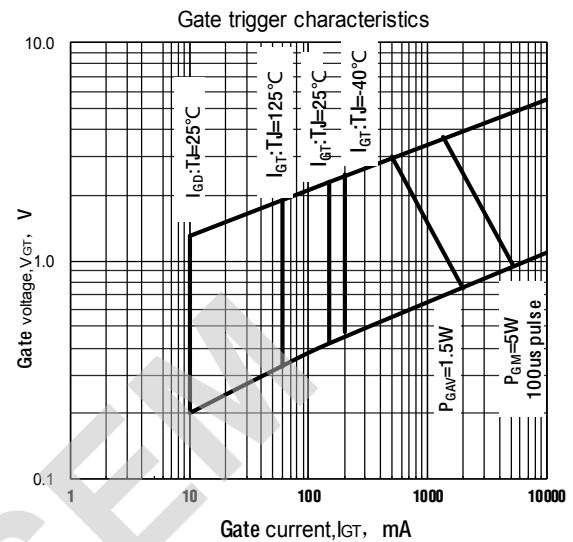


Fig.2

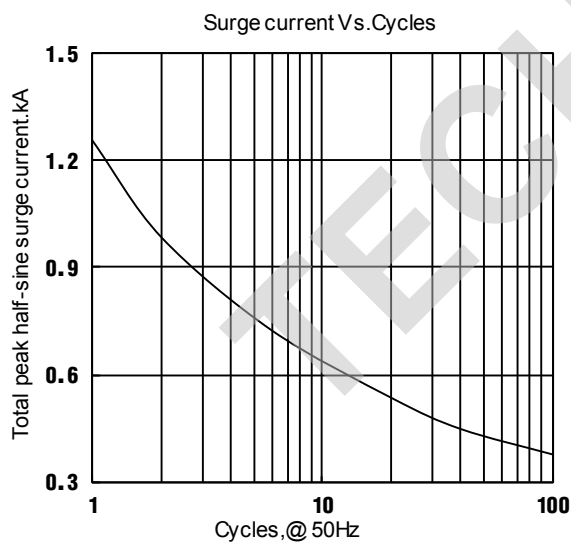


Fig.3

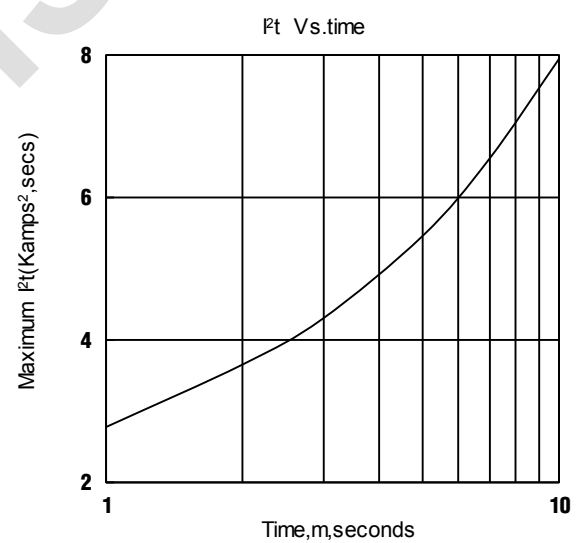


Fig.4

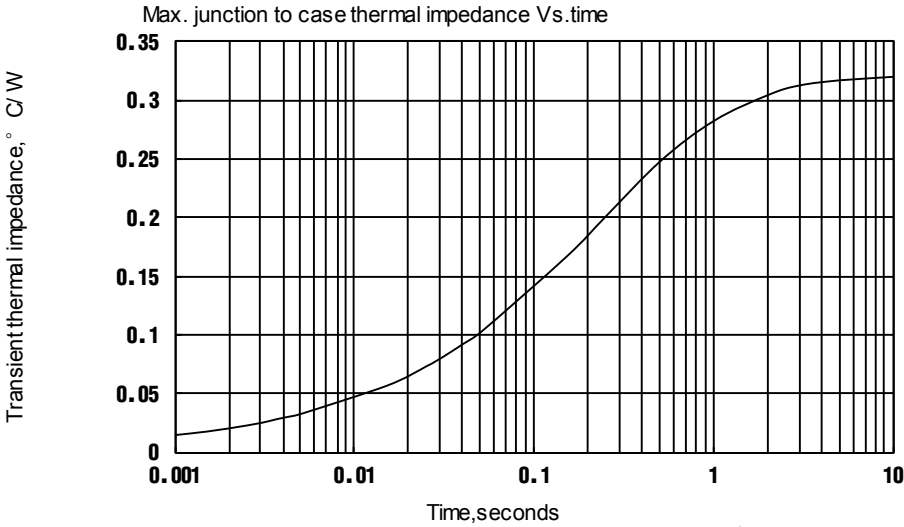
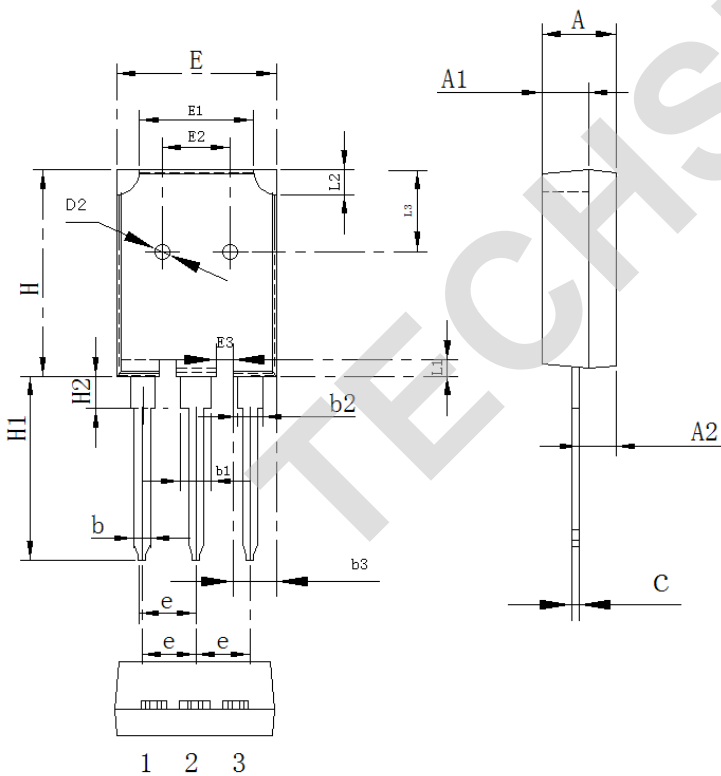


Fig.5

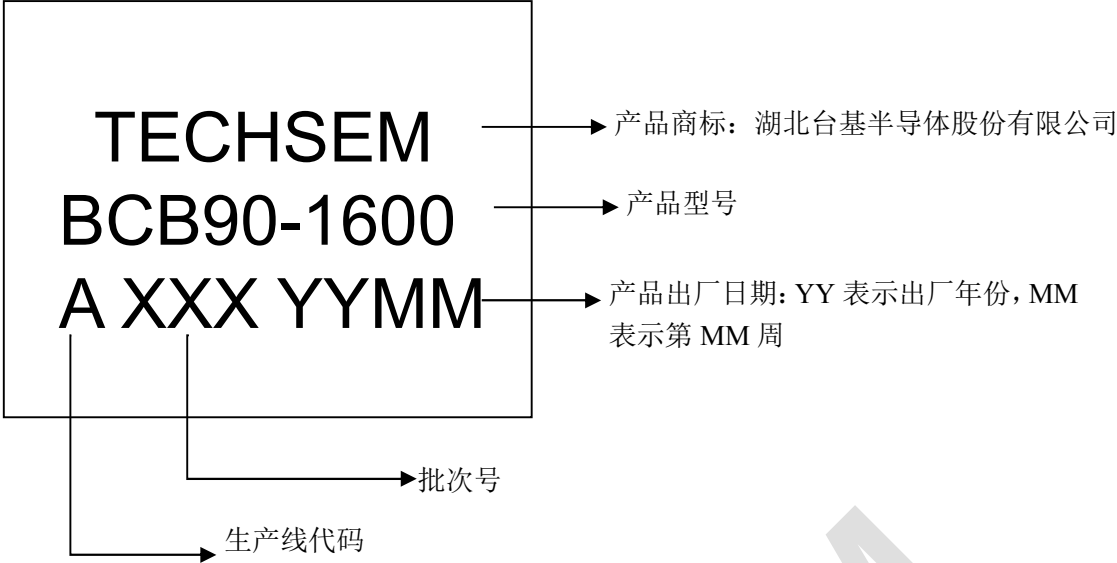
Outline:

TO-247P PACKAGE



Symbol	単位 mm		
	Min	Nom	Max
A	4.80	5.00	5.20
A1	2.80	3.0	3.20
A2	2.20	2.4	2.60
b	1.00	1.20	1.40
b1	2.90	3.10	3.30
b2	1.90	2.10	2.30
b3	3.90	4.10	4.30
c	0.45	0.60	0.75
e	5.25	5.45	5.65
E	15.6	15.8	16.0
E1	10.2	10.6	11.0
E2	6.30	6.06	6.90
E3	1.60	1.80	2.00
L1	0.35	0.50	0.65
L2	1.80	2.00	2.20
L3	9.50	10.0	10.5
H	20.5	21.0	21.5
H1	19.5	20.0	20.5
H2	3.50	4.00	4.50

Code Designation:



Product Nomenclature:

Type	$I_{T(RMS)}$	V_{DRM}, V_{RRM}	I_{TSM}	T_{jmax}	Marking	Outline
BCB90-1600	90A($T_C=115^{\circ}C$)	1600V	1400A	140 $^{\circ}C$	BCB90-1600	TO-247P