Silicon rectifier diodes

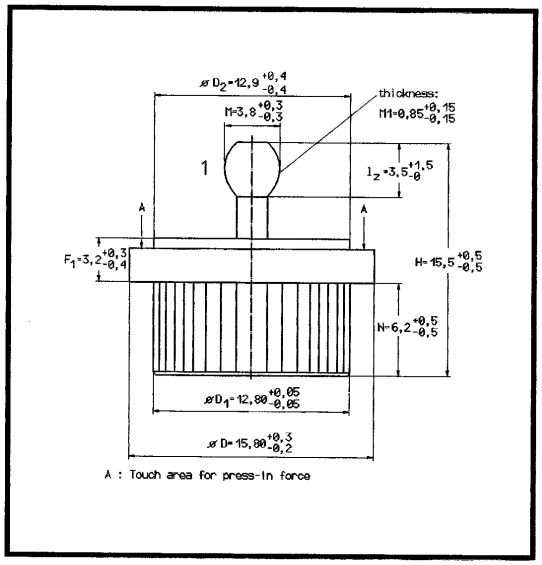
BYY57A /BYY58A

FEATURES

- Forward current 50 A
- Reverse voltage 75 V - 800 V
- hermetic press-fit package
- Available in different modifications of the package

APPLICATIONS

- Rectifying in car generators
- Power supplies
- Rectifier bridges



PIN CONNECTIONS

BYY57A	**BYY58A**
1 - Cathode	1 - Anode
Case - Anode	Case - Cathode

ABSOLUTE MAXIMUM RATINGS

Parameter			Symbol		Unit	Test conditons
Repetitive peak reverse voltage	BYY57A/75	BYY58A/75	V_{RRM}	75	V	T_C = 150 °C
	BYY57A/100	BYY58A/100		100		
	BYY57A/150	BYY58A/150		150		
	BYY57A/200	BYY58A/200		200		
	BYY57A/300	BYY58A/300		300		
	BYY57A/400	BYY58A/400		400		
	BYY57A/500	BYY58A/500		500		
	BYY57A/600	BYY58A/600		600		
	BYY57A/700	BYY58A/700		700		
	BYY57A/800	BYY58A/800		800		

ZETEX

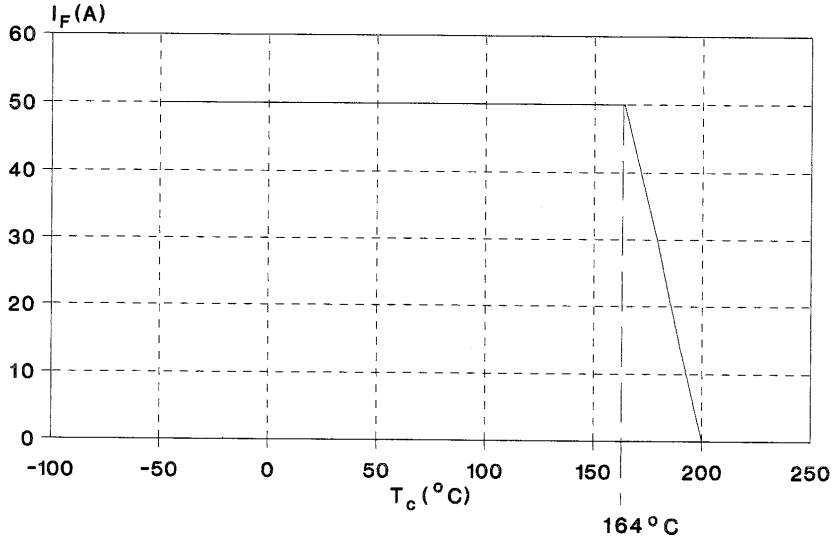
Parameter	Symbol		Unit	Test conditons
Mean forward current	$I_{F(AV)}$	50	A	sinusoidal, f = 15-1000Hz
Surge forward current	I_{FSM}	900	A	T_j = 25 °C, sinusoidal, 1 half wave, ≤10 ms
		800		T_j = 175 °C, sinusoidal, 1 half wave, ≤10 ms
Maximum rated value	$\int i^2dt$	4050	A^2s	T_j = 25 °C, sinusoidal, 1 half wave, ≤10 ms
		3200		T_j = 175 °C, sinusoidal, 1 half wave, ≤10 ms
Repetitive peak forward current	I_{FRM} $=\pi * I_{F(AV)}$	157	A	f = 15-1000Hz
Effective forward current	$I_{F(RMS)}$	78	A	sinusoidal, f = 15-1000Hz
Junction temperature	T_j	200	°C	
Storage temperature range	T_{stg}	-50 to +175	°C	

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25 °C unless otherwise stated)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Test conditions
Forward voltage	BYY57A/75...800 BYY58A/75...800	V_F	-	1.05	1.15	V	I_F = 50 A, measuring time ≤ 2 s
Forward voltage (inf. value)	BYY57A/75...800 BYY58A/75...800	V_F	-	-	1.2	V	I_F = 75 A
Reverse current	BYY57A/75...150 BYY58A/75...150	I_{R2}	-	-	3	mA	T_j = 150 °C, at V_{RRM}
	BYY57A/200...800 BYY58A/200...800		-	-	1,5		
Reverse current	BYY57A/75...400 BYY58A/75...400	I_{R1}	-	-	0.25	mA	at V_{RRM}
	BYY57A/500...800 BYY58A/500...800		-	-	0.1		
Thermal resistance		R_{thjc}	-	0.7	0.8	K/W	

ZETEX

Forward current derating curve
BYY 57A / BYY 58A
$I_F = f(T_c)$



OPTIONS: ELECTRICAL CHARACTERISTICS FOR PARALLEL CONNECTING
(at T_{amb} = 25 °C unless otherwise stated)

Option	Parameter	Symbol	Min.	Typ.	Max.	Unit	Test conditions
1	Forward voltage difference in one categorie of forward voltage	ΔV_F	-	-	0.05	V	I_F = 50 A, measuring time ≤ 2 s
2	Reverse current in one categorie of forward voltage (only for BYY57A/300...800 and BYY58A/300...800)	I_R	-	-	0,01	mA	at V_{RRM}

Devices are identified by type. Colour of marking : BYY57 - black, BYY58 - red



722..... date code **722** = 1997 week 22

BYY57..... diode type **BYY57A** with repetitive peak reverse voltage V_{RRM} (in V) **400**

Ordering information :

- **for basic type without modification of the press-fit package :**
  select type and repetitive peak reverse voltage V_{RRM}
  for example : BYY57A-400 means BYY57A with 400V repetitive peak reverse voltage

- **for basic type with modification of the press-fit package :**
  select type, repetitive peak reverse voltage V_{RRM}, drawing number for the pressfit package modification (see pages 28 - 36) and if necessary specify length accordingly the drawing
  for example : BYY57A-400; No. 9; L=20 mm means BYY57A with 400V repetitive peak reverse voltage and wire (length L=20 mm) accordingly drawing number 9

Application note :
The resistance of the connection wire must be less than 0.5 mΩ.