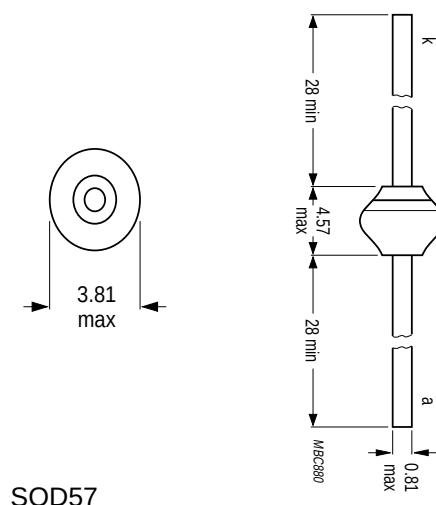


FEATURES

- Glass passivated
- High maximum operating temperature
- Low leakage current
- Excellent stability
- Guaranteed avalanche energy absorption capability
- Available in ammo-pack.



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

LIMITING VALUES

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_{RRM} = V_R$	repetitive peak reverse voltage				
	BYV26A		—	200	V
	BYV26B		—	400	V
	BYV26C		—	600	V
	BYV26D		—	800	V
	BYV26E		—	1000	V
	BYV26F		—	1200	V
	BYV26G		—	1400	V
$I_{F(AV)}$	average forward current	$T_{tp} = 85\text{ °C}$; lead length = 10 mm; see Figs 2 and 3;	—	1.00	A
	BYV26A to E	averaged over any 20 ms period; see also Figs 10 and 11	—	1.05	A
$I_{F(AV)}$	average forward current	$T_{amb} = 60\text{ °C}$; PCB mounting (see Fig.19); see Figs 4 and 5;	—	0.65	A
	BYV26A to E	averaged over any 20 ms period; see also Figs 10 and 11	—	0.68	A
I_{FRM}	repetitive peak forward current				
	BYV26A to E	$T_{tp} = 85\text{ °C}$; see Figs 6 and 7	—	10.0	A
	BYV26F and G		—	9.6	A

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I_{FRM}	repetitive peak forward current	$T_{amb} = 60\text{ °C}$; see Figs 8 and 9	—	6.0	A
	BYV26A to E		—	6.4	A
I_{FSM}	non-repetitive peak forward current	$t = 10\text{ ms}$ half sine wave; $T_j = T_{j\text{ max}}$ prior to surge; $V_R = V_{RRM\text{ max}}$	—	30	A
E_{RSM}	non-repetitive peak reverse avalanche energy	$I_R = 400\text{ mA}$; $T_j = T_{j\text{ max}}$ prior to surge; inductive load switched off	—	10	mJ
T_{stg}	storage temperature		−65	+175	°C
T_j	junction temperature	see Figs 12 and 13	−65	+175	°C

**TAYCHIPST****Fast soft-recovery
controlled avalanche rectifiers****BYV26 series**

200V-1400V 0.65A-1.05

ELECTRICAL CHARACTERISTICS $T_j = 25\text{ }^{\circ}\text{C}$ unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V_F	forward voltage	$I_F = 1\text{ A}$; $T_j = T_{j\text{ max}}$; see Figs 14 and 15	–	–	1.3	V
	BYV26A to E BYV26F and G		–	–	1.3	V
V_F	forward voltage	$I_F = 1\text{ A}$; see Figs 14 and 15	–	–	2.50	V
	BYV26A to E BYV26F and G		–	–	2.15	V
$V_{(BR)R}$	reverse avalanche breakdown voltage	$I_R = 0.1\text{ mA}$				
	BYV26A		300	–	–	V
	BYV26B		500	–	–	V
	BYV26C		700	–	–	V
	BYV26D		900	–	–	V
	BYV26E		1100	–	–	V
	BYV26F		1300	–	–	V
	BYV26G		1500	–	–	V
I_R	reverse current	$V_R = V_{RRM\text{ max}}$; see Fig.16	–	–	5	μA
		$V_R = V_{RRM\text{ max}}$; $T_j = 165\text{ }^{\circ}\text{C}$; see Fig.16	–	–	150	μA
t_{rr}	reverse recovery time	when switched from $I_F = 0.5\text{ A}$ to $I_R = 1\text{ A}$; measured at $I_R = 0.25\text{ A}$; see Fig.20	–	–	30	ns
	BYV26A to C		–	–	75	ns
	BYV26D and E		–	–	150	ns
	BYV26F and G		–	–	150	ns
C_d	diode capacitance	$f = 1\text{ MHz}$; $V_R = 0\text{ V}$; see Figs 17 and 18	–	45	–	pF
	BYV26A to C		–	40	–	pF
	BYV26D and E		–	35	–	pF
	BYV26F and G		–	35	–	pF

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
$\left \frac{dI_R}{dt} \right $	maximum slope of reverse recovery current	when switched from $I_F = 1\text{ A}$ to $V_R \geq 30\text{ V}$ and $dI_F/dt = -1\text{ A}/\mu\text{s}$; see Fig.21	–	–	7	$\text{A}/\mu\text{s}$
	BYV26A to C		–	–	6	$\text{A}/\mu\text{s}$
	BYV26D and E		–	–	5	$\text{A}/\mu\text{s}$
	BYV26F and G		–	–	5	$\text{A}/\mu\text{s}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-tp}$	thermal resistance from junction to tie-point	lead length = 10 mm	46	K/W
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	100	K/W

Note

- Device mounted on an epoxy-glass printed-circuit board, 1.5 mm thick; thickness of Cu-layer $\geq 40\text{ }\mu\text{m}$, see Fig.19.
For more information please refer to the "General Part of associated Handbook".

RATINGS AND CHARACTERISTIC CURVES BYV26 series

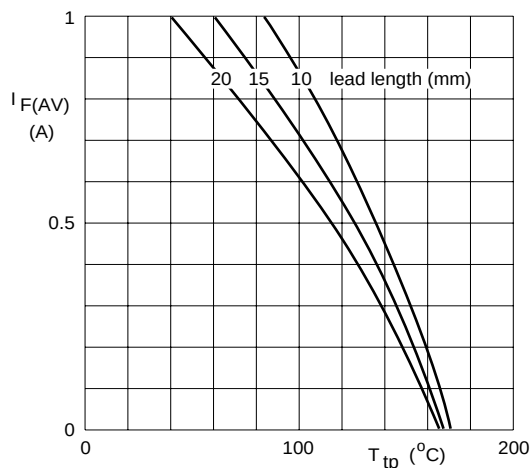


Fig.1 Maximum average forward current as a function of tie-point temperature (including losses due to reverse leakage).

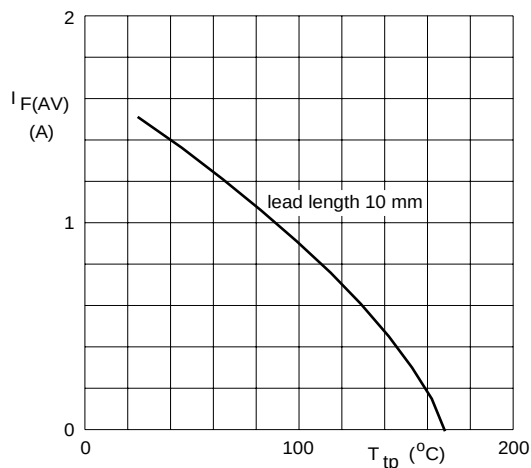


Fig.2 Maximum average forward current as a function of tie-point temperature (including losses due to reverse leakage).

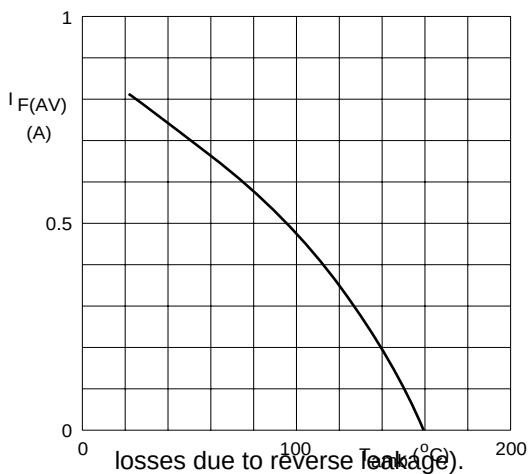


Fig.3 Maximum average forward current as a function of ambient temperature (including losses due to reverse leakage).

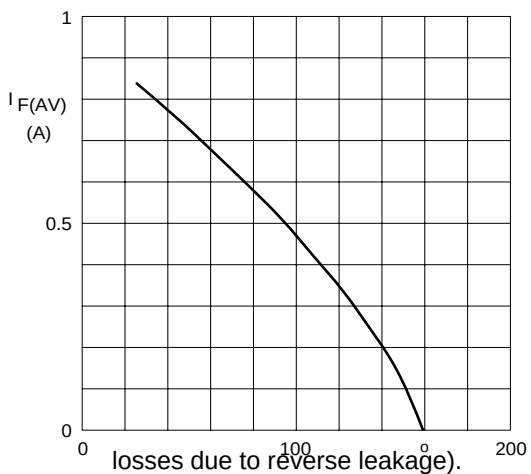


Fig.4 Maximum average forward current as a function of ambient temperature (including losses due to reverse leakage).

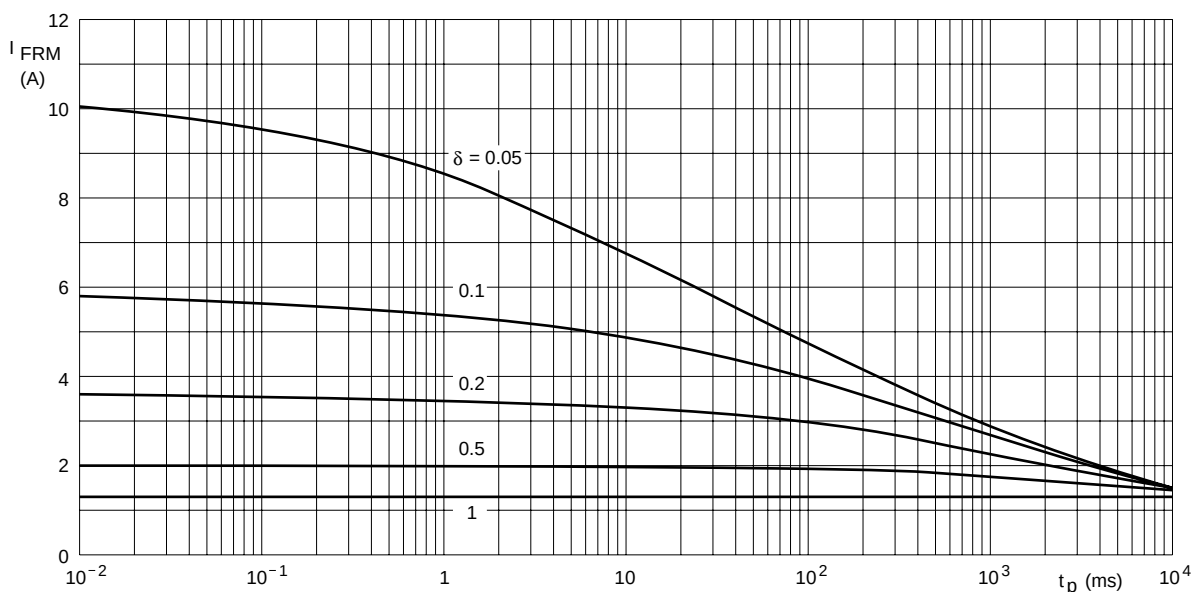


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**Fast soft-recovery
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BYV26 series

200V-1400V 0.65A-1.05

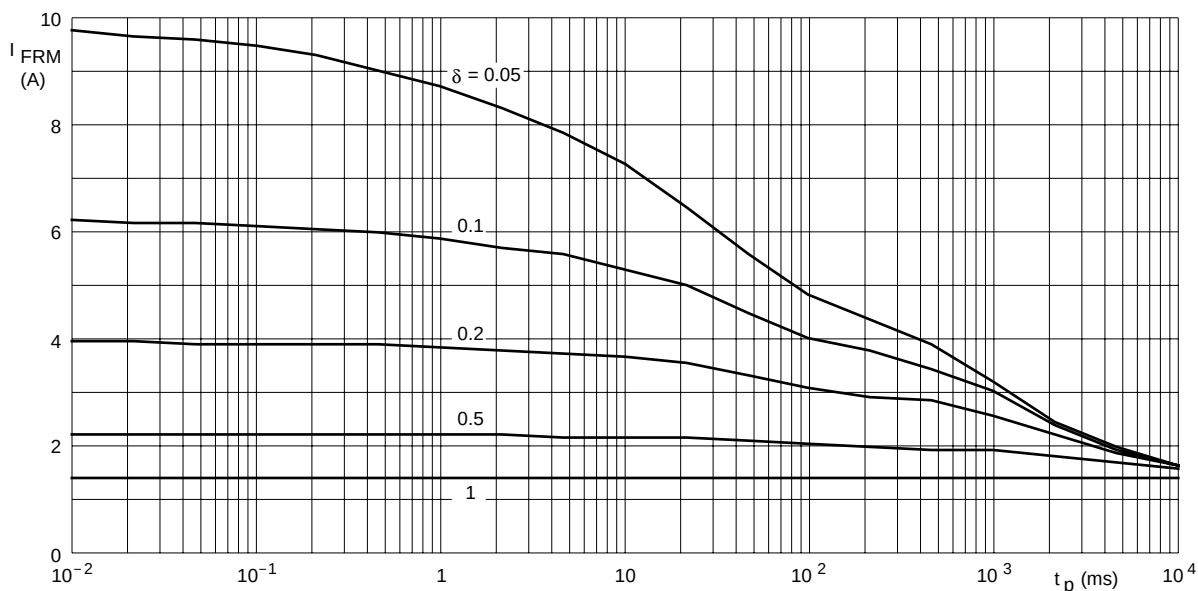


BYV26A to E.

$T_{tp} = 85^{\circ}\text{C}$; $R_{th j-tp} = 46 \text{ K/W}$.

V_{RRMmax} during $1 - \delta$; curves include derating for T_{jmax} at $V_{RRM} = 1000 \text{ V}$.

Fig.5 Maximum repetitive peak forward current as a function of pulse time (square pulse) and duty factor.



BYV26F and G.

$T_{tp} = 85^{\circ}\text{C}$; $R_{th j-tp} = 46 \text{ K/W}$.

V_{RRMmax} during $1 - \delta$; curves include derating for T_{jmax} at $V_{RRM} = 1400 \text{ V}$.

Fig.6 Maximum repetitive peak forward current as a function of pulse time (square pulse) and duty factor.

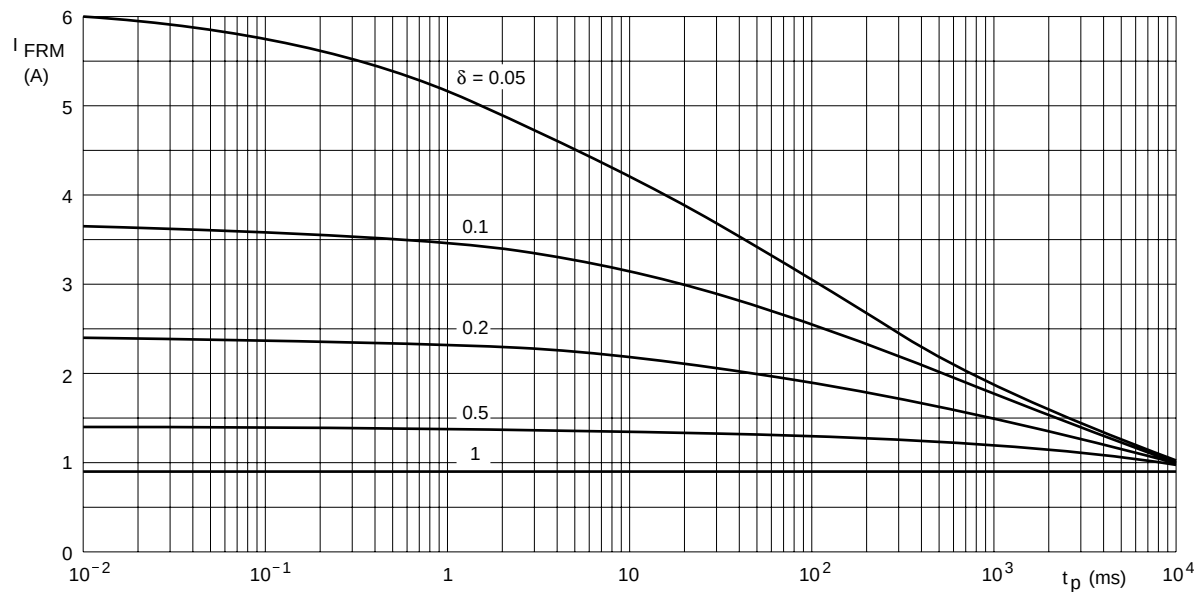


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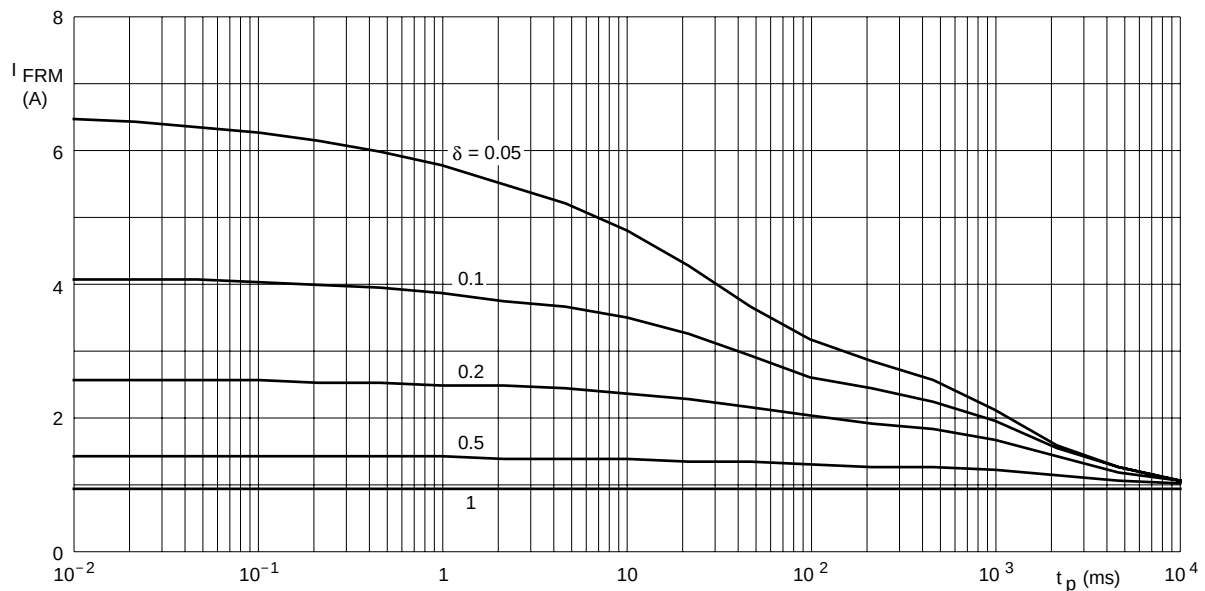


BYV26A to E

$T_{amb} = 60\text{ }^{\circ}\text{C}$; $R_{th\ j-a} = 100\text{ K/W}$.

V_{RRMmax} during $1 - \delta$; curves include derating for $T_{j\ max}$ at $V_{RRM} = 1000\text{ V}$.

Fig.7 Maximum repetitive peak forward current as a function of pulse time (square pulse) and duty factor.

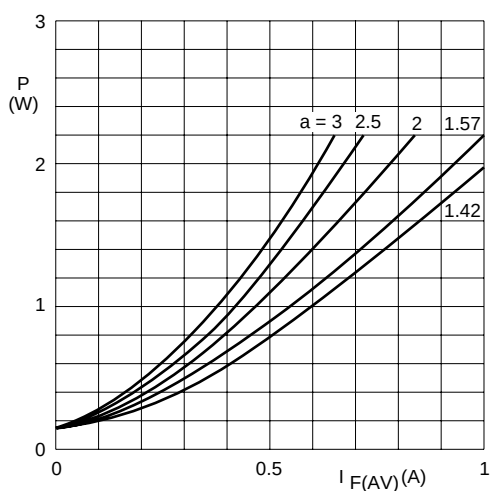


BYV26F and G

$T_{amb} = 60\text{ }^{\circ}\text{C}$; $R_{th\ j-a} = 100\text{ K/W}$.

V_{RRMmax} during $1 - \delta$; curves include derating for $T_{j\ max}$ at $V_{RRM} = 1400\text{ V}$.

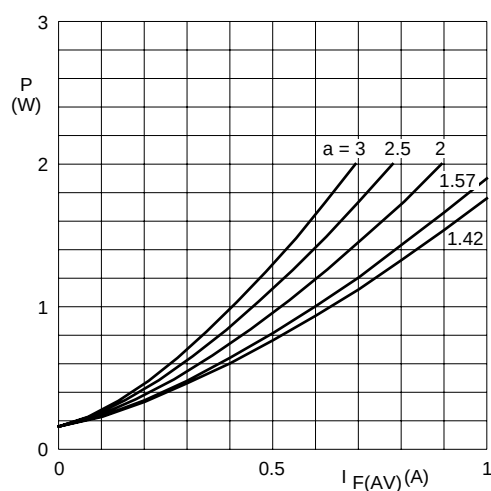
Fig.8 Maximum repetitive peak forward current as a function of pulse time (square pulse) and duty factor.



BYV26A to E

$a = I_{F(RMS)}/I_{F(AV)}$; $V_R = V_{RRMmax}$; $\delta = 0.5$.

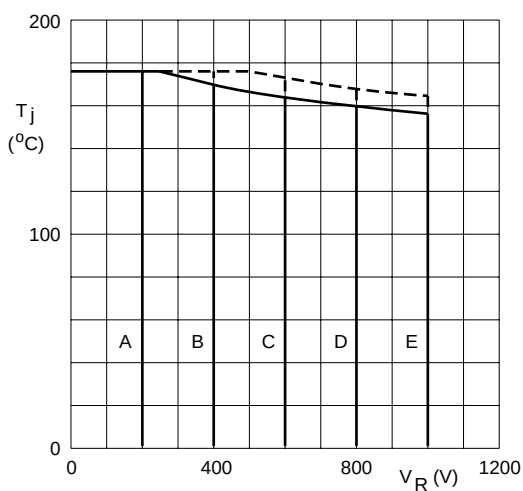
Fig.9 Maximum steady state power dissipation (forward plus leakage current losses, excluding switching losses) as a function of average forward current.



BYV26F and G

$a = I_{F(RMS)}/I_{F(AV)}$; $V_R = V_{RRMmax}$; $\delta = 0.5$.

Fig.10 Maximum steady state power dissipation (forward plus leakage current losses, excluding switching losses) as a function of average forward current.

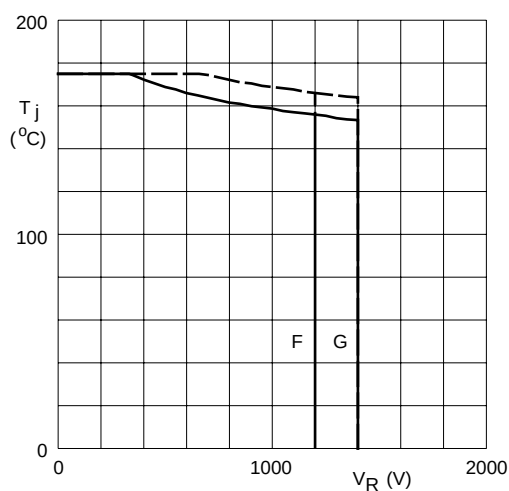


BYV26A to E

Solid line = V_R .

Dotted line = V_{RRM} ; $\delta = 0.5$.

Fig.11 Maximum permissible junction temperature as a function of reverse voltage.

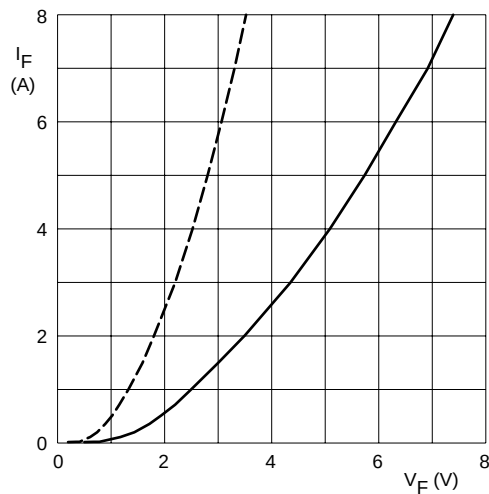


BYV26F and G

Solid line = V_R .

Dotted line = V_{RRM} ; $\delta = 0.5$.

Fig.12 Maximum permissible junction temperature as a function of reverse voltage.

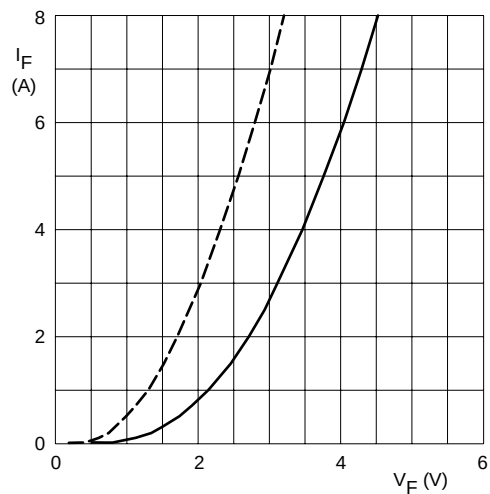


BYV26A to E

Dotted line: $T_j = 175\text{ °C}$.

Solid line: $T_j = 25\text{ °C}$.

Fig.13 Forward current as a function of forward voltage; maximum values.

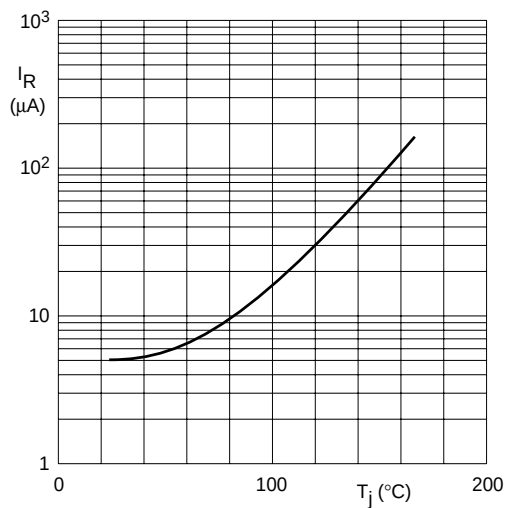


BYV26F and G

Dotted line: $T_j = 175\text{ °C}$.

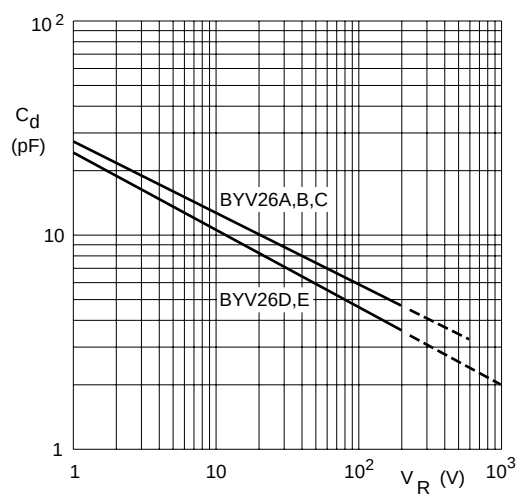
Solid line: $T_j = 25\text{ °C}$.

Fig.14 Forward current as a function of forward voltage; maximum values.



$V_R = V_{RRMmax}$

Fig.15 Reverse current as a function of junction temperature; maximum values.



BYV26A to E

$f = 1\text{ MHz}$; $T_j = 25\text{ °C}$.

Fig.16 Diode capacitance as a function of reverse voltage, typical values.