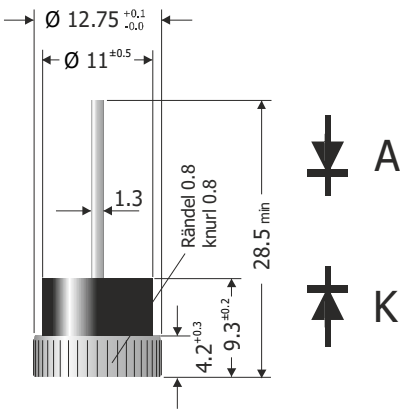
BYZ50A22 ... BYZ50A47 | BYZ50K22 ... BYZ50K47

Press-Fit Diodes – Protectifiers®
Einpress-Dioden – Protectifiers®

I_{FAV}	= 50 A	V_{WM}	= 17.8 ... 38.1 V
V_F	< 1.1 V	$V_{BR\ Min}$	= 19.8 ... 42.3 V
T_{jmax}	= 200°C	I_{FSM}	= 400/450 A

Version 2019-05-27

Ø 12.75 x 4.2
Press-fit



Dimensions - Maße [mm]

Typical Applications
On-board alternators
Load dump protection
Commercial grade [1])

Typische Anwendungen
Bordnetz-Generatoren
"Load dump"-Schutz
Standardausführung [1])

Features
TVS (suppressor) characteristic
High junction temperature
Press-fit assembly into aluminum plate
Two polarity versions:
A = Anode to lead wire
K = Cathode to lead wire
Compliant to RoHS, REACH,
Conflict Minerals [1])

Besonderheiten
TVS-(Begrenzer-)Charakteristik
Hohe Sperrschichttemperatur
Einpressmontage in Alu-Kühlblech
Zwei Polaritäten:
A = Anode am Anschlussdraht
K = Kathode am Anschlussdraht
Konform zu RoHS, REACH,
Konfliktmineralien [1])

Mechanical Data [1]) / **Mechanische Daten [1])**

Packed in cardboard trays	300	Verpackt in Einlagekartons
Weight approx.	10 g	Gewicht ca.
Case material	UL 94V-0	Gehäusematerial
Solder & assembly conditions	260°C/10s MSL N/A	Löt- und Einbaubedingungen

Maximum ratings [2]) / **Grenzwerte [2])**

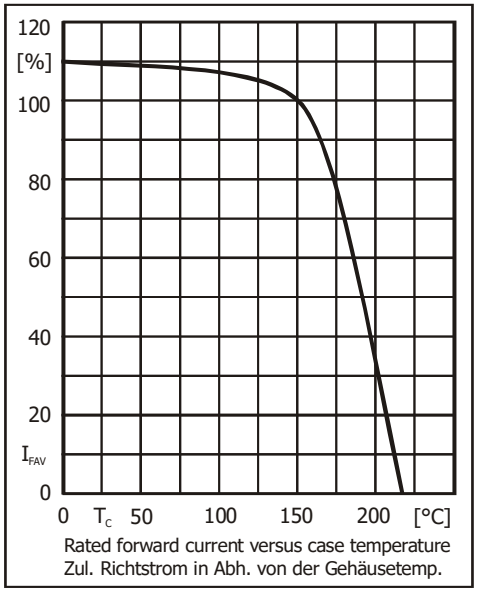
Max. average forward current – Dauergrenzstrom		T_C = 150°C [3])	I_{FAV}	50 A
Repetitive peak forward current – Periodischer Spitzenstrom	f > 15 Hz	T_C = 150°C [3])	I_{FRM}	80 A
Peak forward surge current Stoßstrom in Fluss-Richtung	Half sine-wave Sinus-Halbwelle	50 Hz (10 ms) 60 Hz (8.3 ms)	I_{FSM}	400 A 450 A
Rating for fusing – Grenzlastintegral		t < 10 ms	i^2t	800 A^2s
Junction temperature – Sperrschichttemperatur Storage temperature – Lagerungstemperatur			T_j T_S	-50...+200°C -50...+200°C
Peak junction temperature in case of load dump Spitzensperrschichttemperatur im "Load dump" Fall		t < 400 ms	T_{jM}	+215°C
Maximum pressing force – Maximaler Einpressdruck			F_{pM}	4 kN

Characteristics (T_j = 25°C) / **Kennwerte** (T_j = 25°C)

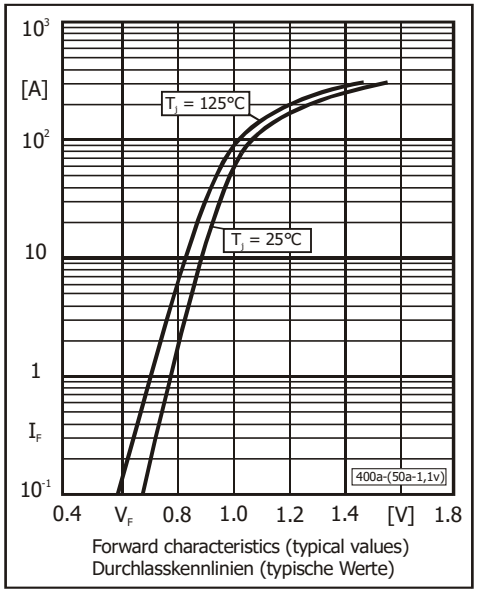
Type / Typ Wire to / Draht an		Breakdown voltage Abbruchspannung I_T = 100 mA		Reverse voltage Sperrspannung I_R = 5 µA	Max. clamping voltage Max. Begrenzerspannung. at / bei I_{pp}, t_p = 1 ms	
Anode	Cathode	V_{BRmin} [V]	V_{BRmax} [V]	V_R [V]	V_C [V]	I_{pp} [A]
BYZ50A22	BYZ50K22	19.8	24.2	> 17.8	31.9	235
BYZ50A27	BYZ50K27	24.3	29.7	> 21.8	39.1	192
BYZ50A33	BYZ50K33	29.7	36.3	> 26.8	47.7	157
BYZ50A39	BYZ50K39	35.1	42.9	> 31.6	56.4	133
BYZ50A47	BYZ50K47	42.3	51.7	> 38.1	67.8	111

1 Please note the detailed information on our website or at the beginning of the data book
Bitte beachten Sie die detaillierten Hinweise auf unserer Internetseite bzw. am Anfang des Datenbuches
2 T_A = 25°C unless otherwise specified – T_A = 25°C wenn nicht anders angegeben
3 Temperature measured at the metallic base – Temperatur am Metallsockel gemessen

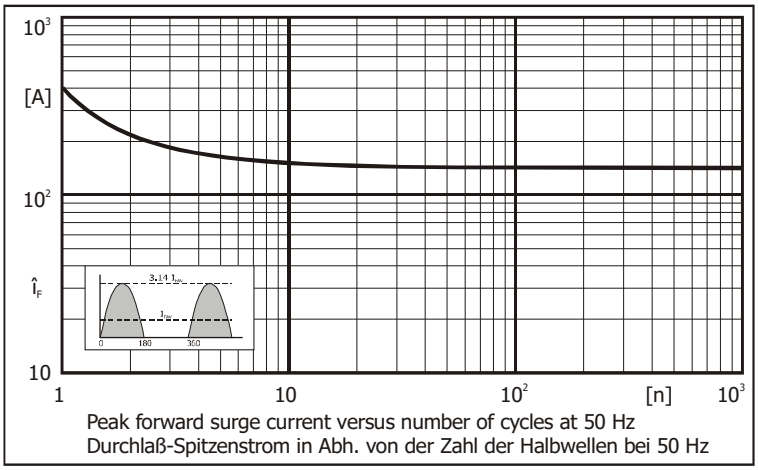
Characteristics			**Kennwerte**
Forward voltage Durchlass-Spannung	T_j = 25°C I_F = 50 A	V_F	< 1.1 V
Typical junction capacitance Typische Sperrschichtkapazität	V_R = 4 V	C_j	430 pF
Reverse recovery time Sperrverzug	I_F = 0.5 A through/über I_R = 1 A to I_R = 0.25 A	t_{rr}	typ. 1500 ns
Typical thermal resistance junction to case Typischer Wärmewiderstand Sperrschicht – Gehäuse		R_{thC}	0.6 K/W [1])



Rated forward current versus case temperature
Zul. Richtstrom in Abh. von der Gehäusetemp.



Forward characteristics (typical values)
Durchlasskennlinien (typische Werte)



Peak forward surge current versus number of cycles at 50 Hz
Durchlaß-Spitzenstrom in Abh. von der Zahl der Halbwellen bei 50 Hz

Disclaimer: See data book page 2 or website
Haftungssauschluss: Siehe Datenbuch Seite 2 oder Internet

1 Temperature measured at the metallic base – Temperatur am Metallsockel gemessen

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