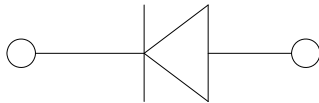


Fast Recovery Rectifier



Features

- High efficiency
- High current capability
- High reliability
- High surge current capability
- Low power loss
- Glass passivated chip junction
- Solder dip 275 °C max. 7 s, per JESD 22-B106

Mechanical Data

- **Package:** DO-204AL(DO-41)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes cathode end

■Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	FR520
Device marking code			FR520
Maximum Repetitive Peak Reverse Voltage	VRRM	V	2000
Maximum RMS Voltage	VRMS	V	1400
Maximum DC blocking Voltage	VDC	V	2000
Average Forward Current @60Hz sine wave, Resistance load, Ta=50°C	IF(AV)	A	0.5
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Tj=25°C	IFSM	A	30
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25°C			60
Current squared time @1ms≤t≤8.3ms Tj=25°C, Rating of per diode	I²t	A²s	3.735
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	Cj	pF	8
Storage Temperature	Tstg	°C	-55 ~ +150
Junction Temperature	Tj	°C	-55 ~ +150

■Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	FR520
Maximum instantaneous forward voltage drop per diode	VF	V	IFM=0.1A	1.8
			IFM=0.5A	2.5
Maximum DC reverse current at rated DC blocking voltage per diode	IR	μA	Tj=25°C	5
			Tj=125°C	100
Maximum reverse recovery time	tr	ns	IF=0.5A, IR=1.0A, IR=0.25A	500



FR520

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	FR520
Typical Thermal Resistance	R _{θJA}	°C/W	55

■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
FR520	D1	Approximate 0.30	5000	5000	50000	Tape
FR520	C1	Approximate 0.30	1000	1000	50000	Bulk

■ Characteristics (Typical)

FIG.1: I_o-T_a Curve

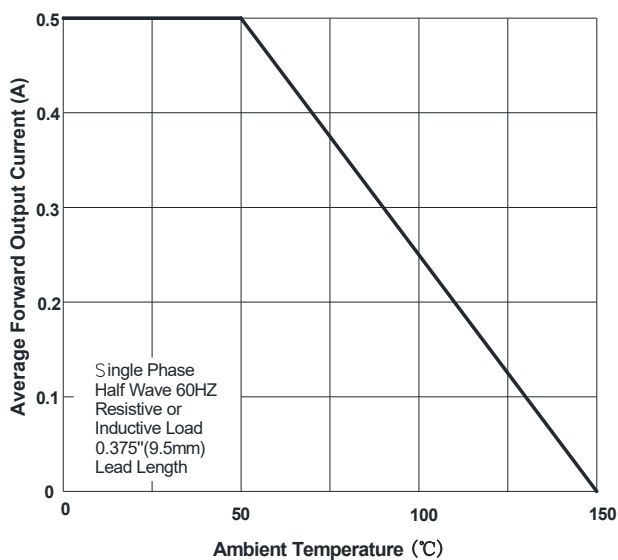


FIG.2: Forward Surge Current Capability

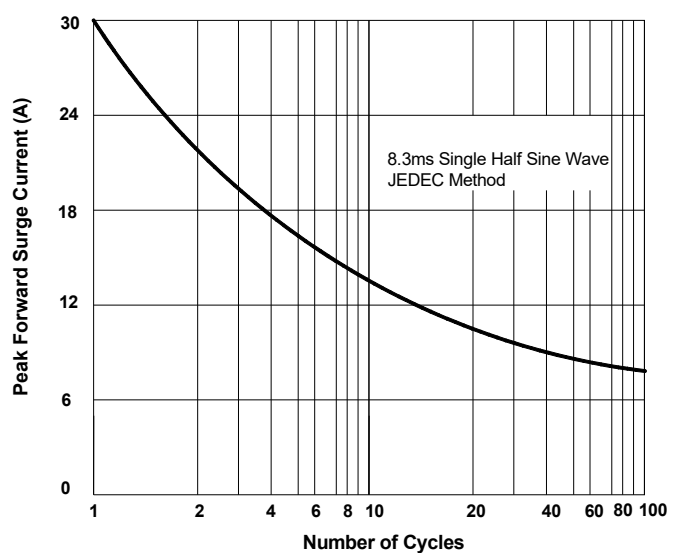


FIG.3: Typical Forward Voltage

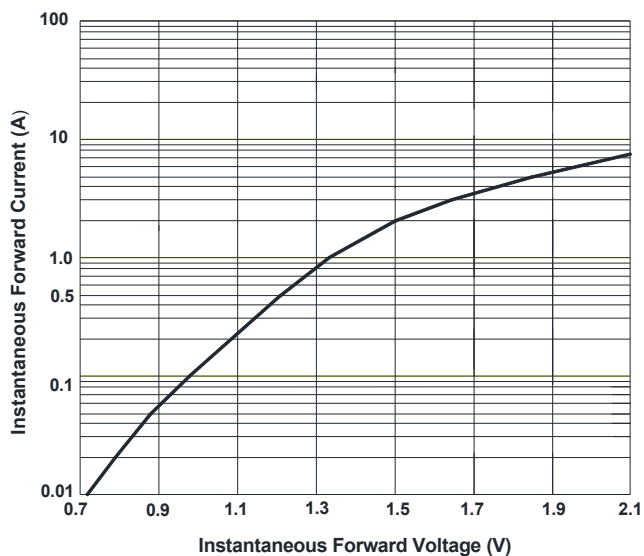


FIG.4: Typical Reverse Characteristics

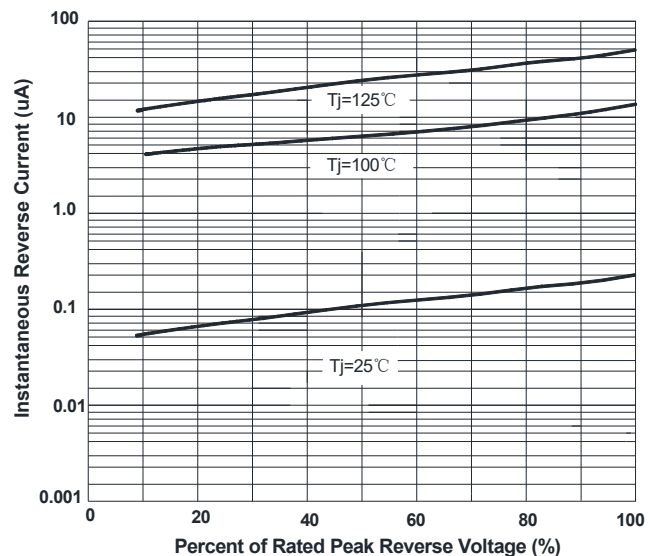
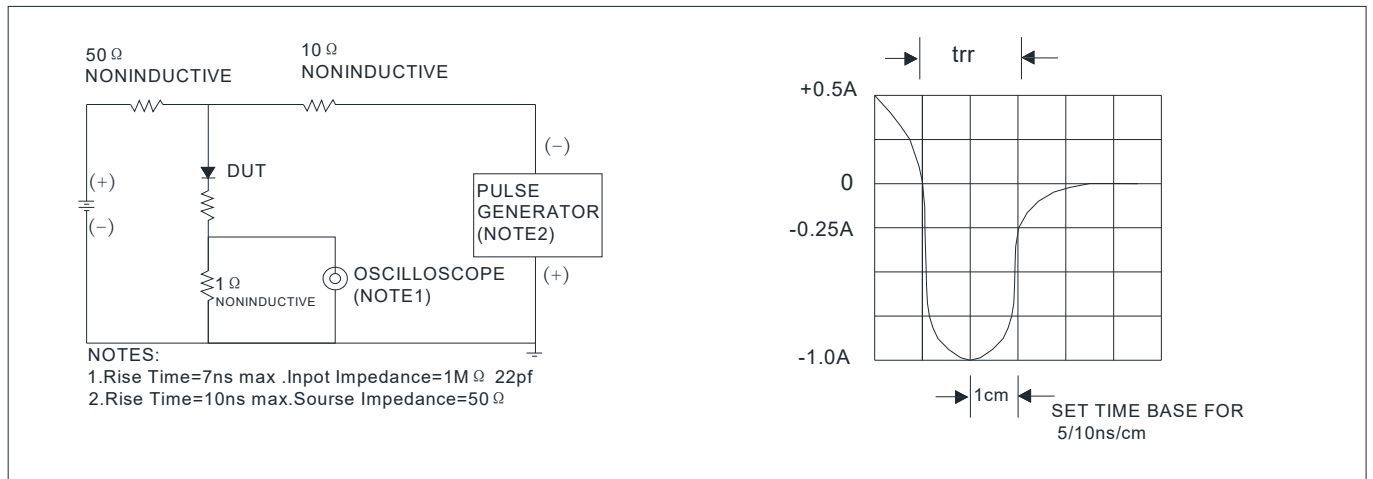
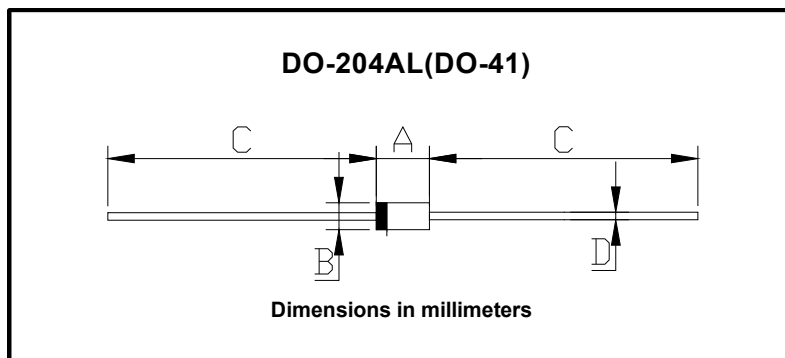


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■ Outline Dimensions



DO-204AL (DO-41)		
Dim	Min	Max
A	4.22	5.21
B	2.03	2.72
C	25.4	/
D	0.69	0.86



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