




SPECIFICATION SHEET

SPECIFICATION SHEET NO.	N0310-DO41SF1800A160
DATE	Mar. 10, 2021
REVISION	A0
DESCRIPTION	<p>Axial Lead Super Fast Rectifier, DO-41 series, SF18 – T/B Type 2 Pins</p> <p>Reverse Voltage 600V Max. Forward Current 1.0A Max.</p> <p>Operating Temp. Range -65°C ~+150°C</p> <p>Package in AMMO Pack, 5000pcs/Tape, Tape/Box</p> <p>RoHS/RoHS III compliant</p>
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	MDD SF18 -T/B
PART CODE	DO41SF1800A160

VENDOR APPROVE			
Issued/Checked/Approved			
DATE: March 10, 2021			

CUSTOMER APPROVE	
DATE:	

SUPER FAST RECTIFIER DO-41 SERIES



MAIN FEATURE

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Super Fast switching for high efficiency
- High forward surge current capability
- High temperature soldering guaranteed, 250 °C/10 seconds at terminals
- Low reverse leakage

APPLICATION

- For printed circuit board

RFQ

[Request For Quotation](#)

PART CODE GUIDE

DO41	SF1800	A	160
1	2	3	4

- 1) **DO41**: Axial Lead Super Fast Rectifier, DO-41 series code, 2 pins
- 2) **SF1800**: Type code for original part number SF18 -T/B
- 3) **A**: Package code, Package in AMMO Pack, 5000pcs/Tape, Tape/Box
- 4) **160**: Specification code for Reverse Voltage 600V Max. Forward Current 1.0A Max.

MORE ITEMS AVAILABLE

DO41SF1100A105	DO41SF1200A110	DO41SF1300A150	DO41SF1400A120	DO41SF1500A130
DO41SF1600A140	DO41SF1800A160			
DO41MUR120A120	DO41MUR140A140	DO41MUR160A160		

SUPER FAST RECTIFIER DO-41 SERIES

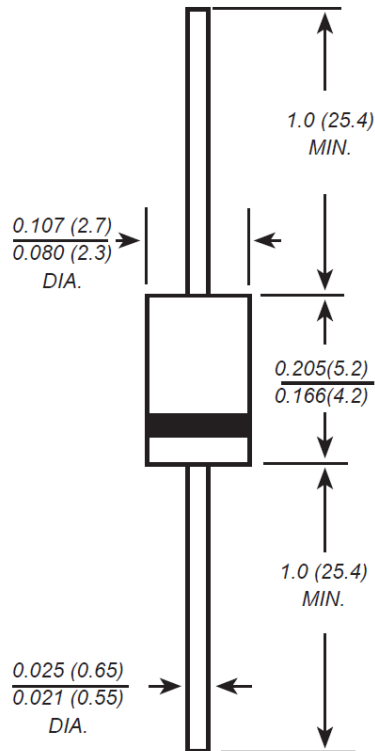
DIMENSION (Unit: Inch/mm)

Image for reference



Marking: SF18

DO-41



SUPER FAST RECTIFIER DO-41 SERIES
MECHANICAL DATA

Case	Terminals	Polarity	Mounting Position	Weight per piece
JEDEC DO-41 molded plastic body	Solder plated, Solderable per MIL-STD-750, Method 2026	Polarity symbol marking on case	Any	0.012 Ounce, 0.373 grams

MAX. RATING & CHARACTERISTICS

Parameter	SYMBOLS	VALUE			UNITS
		Min.	Typical	Max.	
Repetitive peak reverse voltage	V _{RRM}			600	Volts
RMS voltage	V _{RMS}			420	Volts
DC blocking voltage	V _{DC}			600	Volts
Average forward output rectified current at TL= 55°C	I _{AV}			1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}		30		A
Instantaneous forward voltage at 1.0A	V _F			1.70	Volts
DC reverse current at rated DC blocking voltage	I _R			5	μA
				50	μA
Reverse recovery Time (Note 2)	t _{rr}			35	ns
Junction capacitance (Note 3)	C _J		10		pF
Thermal resistance (Note 4)	R _{QJA}		60		°C/W
Operating junction temperature range	T _J	-65		+150	°C
Storage temperature range	T _{STG}	-65		+150	°C

Note

1. Ratings at 25 C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.
2. Reverse recovery condition IF=0.5A,IR=1.0A,Irr=0.25A
3. Measured at 1.0MHz and applied reverse voltage of 4.0Voltage
4. P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas.

SUPER FAST RECTIFIER DO-41 SERIES

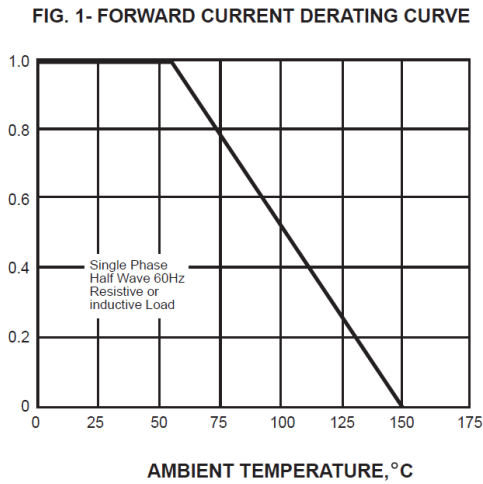
RELIABILITY

Number	Experiment Items	Experiment Method And Conditions	Reference Documents
1	Solder Resistance Test	Test 260°C± 5°C for 10 ± 2 sec. Immerse body into solder 1/16" ± 1/32"	MIL-STD-750D METHOD-2031.2
2	Solderability Test	230°C ±5°C for 5 sec.	MIL-STD-750D METHOD-2026.1 0
3	Pull Test	1 kg in axial lead direction for 10 sec.	MIL-STD-750D METHOD-2036.4
4	Bend Test	0.5Kg Weight Applied To Each Lead, Bending Arcs 90 °C ± 5 °C For 3 Times	MIL-STD-750D METHOD-2036.4
5	High Temperature Reverse Bias Test	TA=100°C for 1000 Hours at VR=80% Rated VR	MIL-STD-750D METHOD-1038.4
6	Forward Operation Life Test	TA=25°C Rated Average Rectified Current	MIL-STD-750D METHOD-1027.3
7	Intermittent Operation Life Test	On state: 5 min with rated IRMS Power Off state: 5 min with Cool Forced Air. On and off for 1000 cycles.	MIL-STD-750D METHOD-1036.3
8	Pressure Cooker Test	15 PSIG, TA=121°C, 4 hours	MIL-S-19500 APPENOIXC
9	Temperature Cycling Test	-55°C~+125°C; 30 Minutes For Dwelled Time 5 minutes for transferred time. Total: 10 cycles.	MIL-STD-750D METHOD-1051.7
10	Thermal Shock Test	0°C for 5 minutes., 100°C for 5minutes, Total: 10 cycles	MIL-STD-750D METHOD-1056.7
11	Forward Surge Test	8.3ms Single Sale Sine-wave One Surge.	MIL-STD-750D METHOD-4066.4
12	Humidity Test	TA=65°C, RH=98% for 1000 hours.	MIL-STD-750D METHOD-1021.3
13	High Temperature Storage life Test	150°C for 1000 Hours	MIL-STD-750D METHOD-1031.5

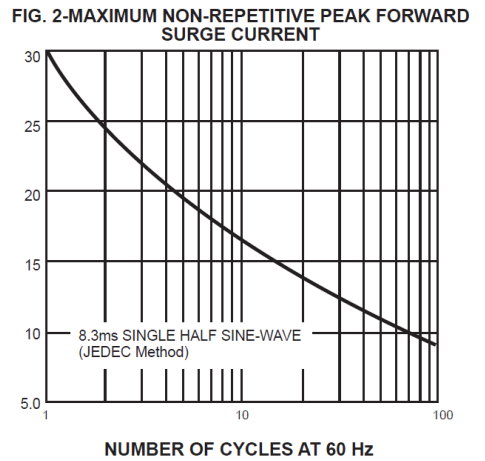
SUPER FAST RECTIFIER DO-41 SERIES

RATINGS AND CHARACTERISTIC CURVES (For Reference Only)

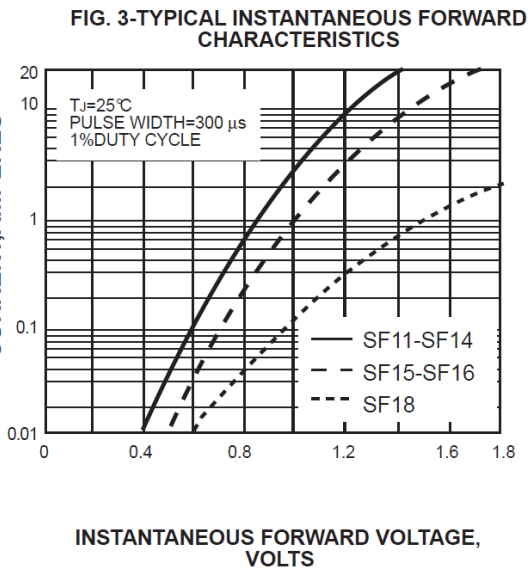
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES



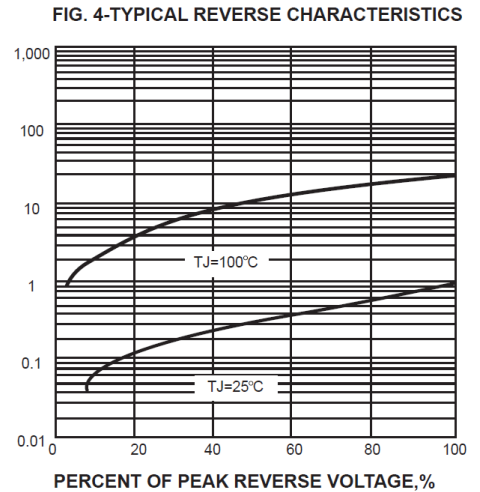
PEAK FORWARD SURGE CURRENT, AMPERES



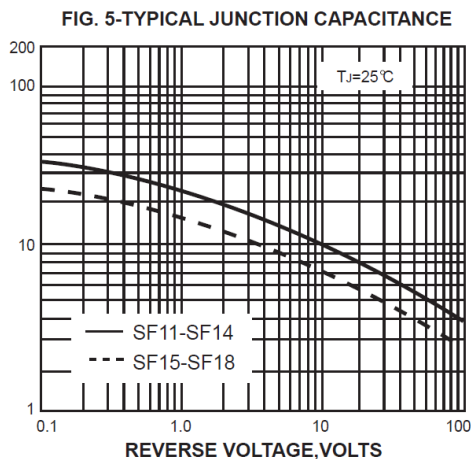
INSTANTANEOUS FORWARD CURRENT, AMPERES



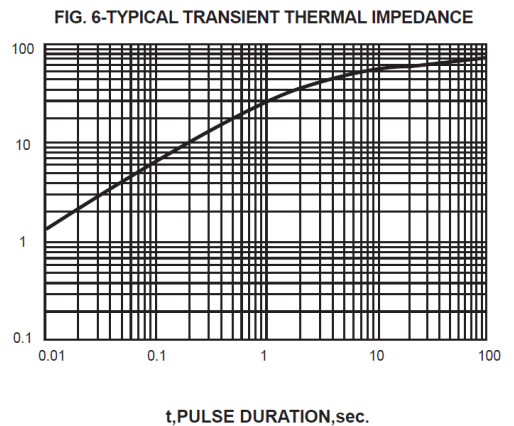
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES



JUNCTION CAPACITANCE, pF



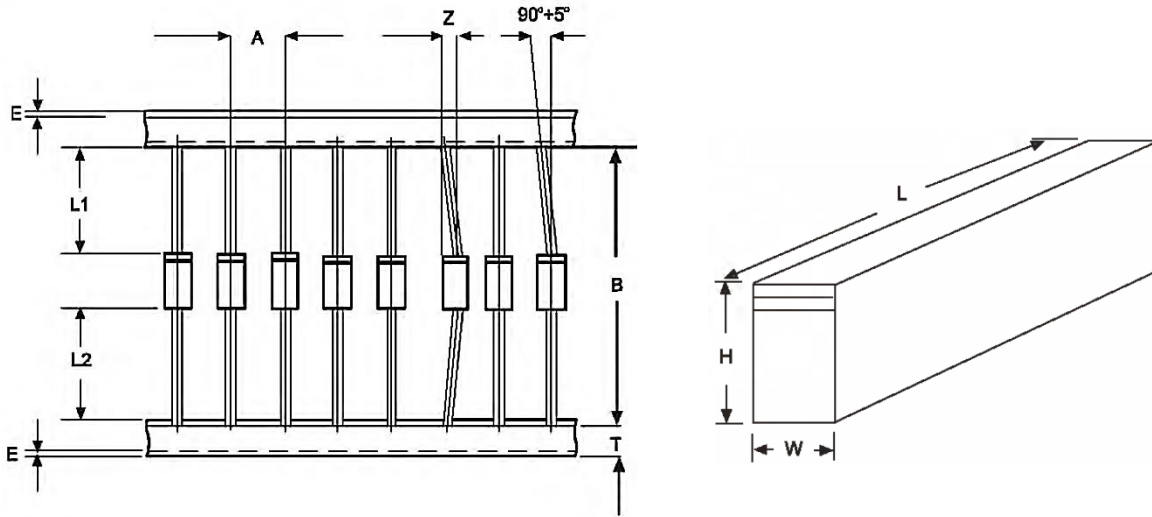
TRANSIENT THERMAL IMPEDANCE, °C/W



SUPER FAST RECTIFIER DO-41 SERIES

AMMO BOX (Unit: mm)

- All Devices are packed in accordance with EIA standard RS-296-D and specifications.
- Each component lead shall be sandwiched between taps for A minimum of 3.2 mm (-.126")



Item	Symbol	DO-41 Uni(mm)	DO-41 Unit (Inch)
Component Alignment	Z	1.2 Max.	0.048 Max.
Tape Width	T	6.0 +/- 0.4	0.236 +/- 0.016
Exposed Adhesive	E	0.8 Max.	0.032 Max.
Body Eccentricity	L1 – L2	1.0 Max.	0.040 Max.
Component Pitch A (2.0mm/20 pitch)	A	5.0	0.197
Component Pitch B (2.0mm/20 pitch)	B	26.0	1.023
Component Pitch A (2.0mm/10 pitch)	A	5.0	0.197
Component Pitch B (2.0mm/10 pitch)	B	52.4	2.063
Box Length	L	255.0 +/- 5.0	10.04 +/- 0.197
Box Width	W	78.0 +/- 5.0	3.07 +/- 0.197
Box Height	H	150.0 +/- 5.0	5.91 +/- 0.197

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AMMO PACK IN TAPE/BOX (Unit: mm)

Case Code	Qty. Per Reel (pcs)	Component Space (mm)	Tape Space (mm)	Inner Box L*W*H (mm)	Carton size L*W*H (mm)	Qty. Per Carton (pcs)	G. W (kg)
DO-41	5000	5.0	52.4	198*86*21	450*215*250	50,000	12.45

DISCLAIMER

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