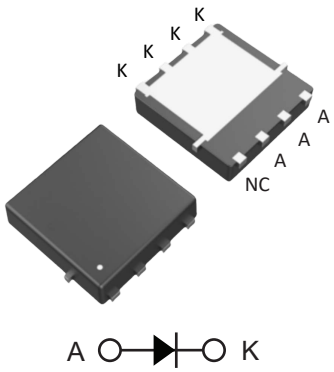
Epitaxial Superfast Recovery Rectifier

MURE860SD-S

DFN5x6



Features

- Low forward voltage drop
- Low leakage current
- High current capability
- Super fast switching speed
- High forward surge capability
- High reliability

Mechanical Data

- Epoxy: UL 94V-O rate flame retardant
- Lead: lead solderable per MIL-STD-202, method 208 guaranteed
- Mounting position: SMT

Parameter	Symbols	MURE860SD-S		Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600		V
Maximum RMS voltage	V_{RMS}	420		V
Maximum DC Blocking Voltage	V_{DC}	600		V
Maximum Average Forward Rectified Current	$I_{(AV)}$	8.0		A
Reverse Recovery Time. IF=0.5A,IR=1A,IRR=0.25A	Trr	35		ns
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	90		A
I^2t rating for fusing (1ms< t < 10ms)	I^2t	33.6		A^2S
Instantaneous Forward Voltage per Diode@TA=25 °C		Typ	Max	V
	IF=2A	0.98	--	
	IF=8A	1.40	1.60	
	V_F			
Maximum DC Reverse Current @TA=25 °C at Rated DC Blocking Voltage @TA=125 °C	I_R	5 250		μA
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150		°C
Typical thermal resistance (Note 1)	RthJC	6.0		°C/W

Note: 1. Thermal resistance junction to case, lead and ambient in accordance with JESD-51.
Unit mounted on glass-epoxy substrate with 1oz/ft2_20x20 mm copper pad per pin with heatsink

RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

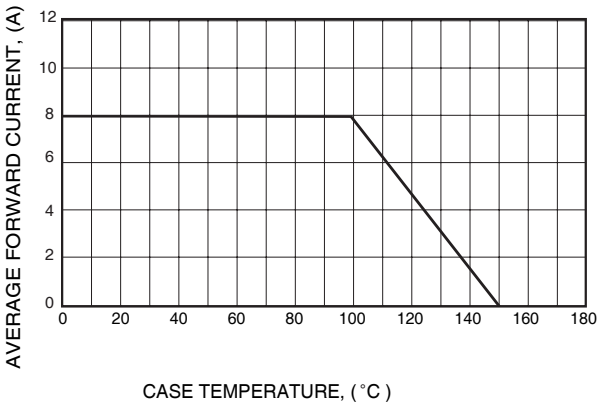


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

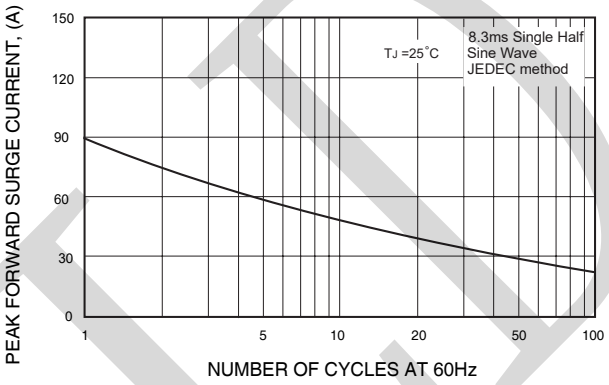


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

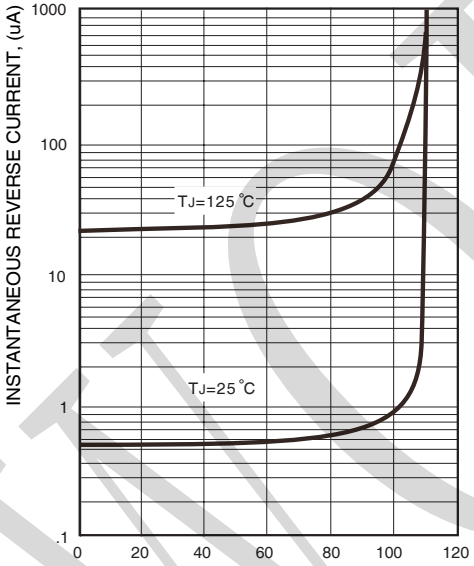
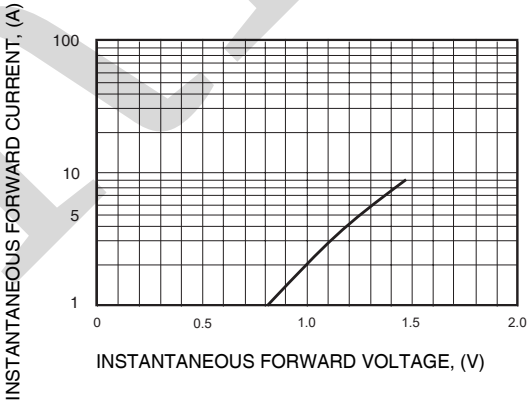
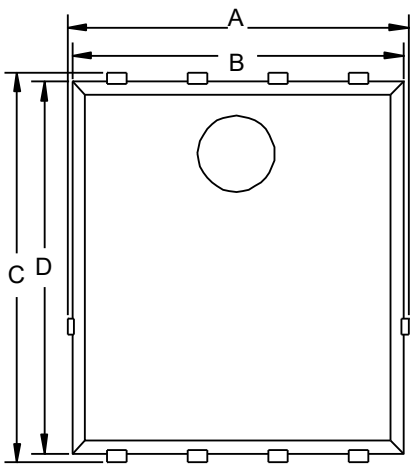


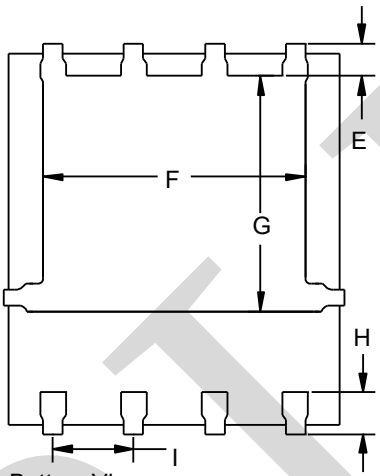
FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



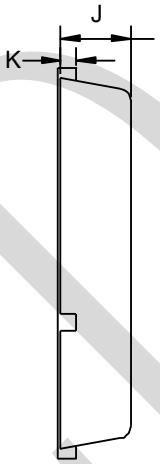
PACKAGE OUTLINE DIMENSIONS



Top View



Bottom View

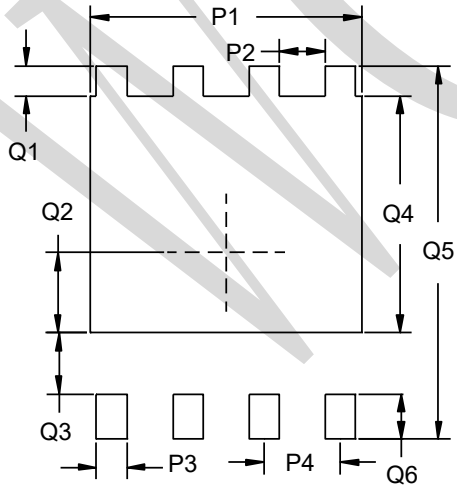


Side View

PDFN5x6 mechanical data

UNIT		A	B	C	D	E	F	G	H	I	J	K
mm	min	4.90	4.8	5.90	5.66	0.60	3.90	3.30	0.53	1.27	0.9	0.254
	max	5.55	5.4	6.35	6.06		4.32	3.92	0.76		1.2	
mil	min	192.9	188.9	232.3	222.8	23.6	153.5	129.9	20.8	50.0	35.4	10.0
	max	218.5	212.6	250.0	238.6		170.1	154.3	29.9		47.2	

PDFN5x6 Suggested Pad Layout

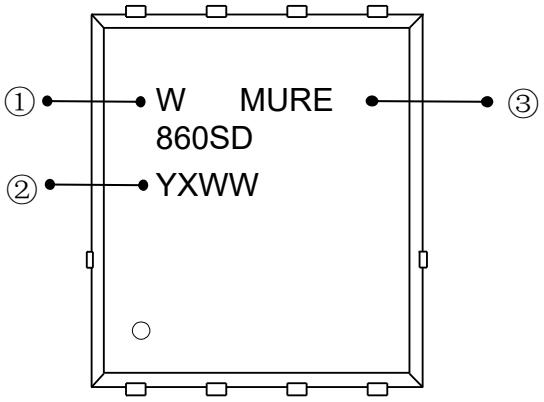


UNIT		P1	P2	P3	P4	Q1
mm	min	4.52	0.76	0.51	1.27	0.50
mil	min	177.9	29.9	20.07	50.0	20.0

UNIT		Q2	Q3	Q4	Q5	Q6
mm	min	1.34	1.02	3.97	6.25	0.76
mil	min	52.75	40.15	156.30	246.06	29.92

PACKAGE OUTLINE DIMENSIONS

Marking Information



①W : Company's trademark
②Product model : MURE860SD
③PDC information：