



8.0A Surface Mount Schottky Barrier Rectifiers - 20V-100V

Features

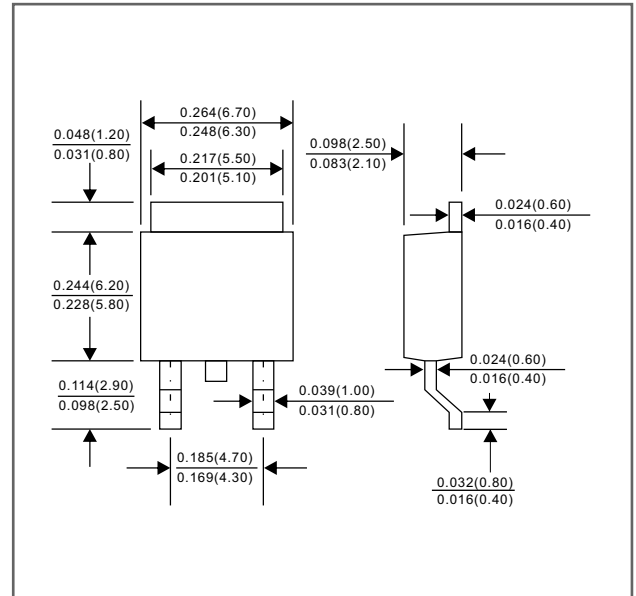
- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile surface mounted application in order to optimize board space.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guardring for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts meet environmental standards of MIL-STD-19500/228
- Suffix "-H" indicates Halogen free parts, ex. FMSK820Y-DG-H.

Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case: Molded plastic, TO-252 / DPAK
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Mounting Position: Any
- Weight: Approximated 0.34 gram

Package outline

DPAK



Dimensions in inches and (millimeters)

Maximum ratings (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

| PARAMETER | CONDITIONS | Symbol | MIN. | TYP. | MAX. | UNIT |
|---------------------------|---|-----------------|------|------|------|---------------------------|
| Forward rectified current | See Fig.1 | I_O | | | 8.0 | A |
| Forward surge current | 8.3ms single half sine-wave superimposed on rate load (JEDEC methode) | I_{FSM} | | | 150 | A |
| Reverse current | $V_R = V_{RRM}$ $T_J = 25^\circ\text{C}$ | I_R | | | 0.5 | mA |
| | $V_R = V_{RRM}$ $T_J = 100^\circ\text{C}$ | | | | 20 | |
| Thermal resistance | Junction to case | $R_{\theta JC}$ | | 3.0 | | $^\circ\text{C}/\text{W}$ |
| Storage temperature | | T_{STG} | -65 | | +175 | $^\circ\text{C}$ |

| SYMBOLS | V_{RRM}^{*1} (V) | V_{RMS}^{*2} (V) | V_R^{*3} (V) | V_F^{*4} (V) | Operating temperature T_J , ($^\circ\text{C}$) |
|--------------|-----------------------|-----------------------|-------------------|-------------------|---|
| FMSK820Y-DG | 20 | 14 | 20 | 0.55 | -55 to +125 |
| FMSK840Y-DG | 40 | 28 | 40 | | |
| FMSK845Y-DG | 45 | 31.5 | 45 | | |
| FMSK850Y-DG | 50 | 35 | 50 | 0.75 | -55 to +150 |
| FMSK860Y-DG | 60 | 42 | 60 | | |
| FMSK880Y-DG | 80 | 56 | 80 | 0.85 | |
| FMSK8100Y-DG | 100 | 70 | 100 | | |

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage@ $I_F = 8.0\text{A}$

Rating and characteristic curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

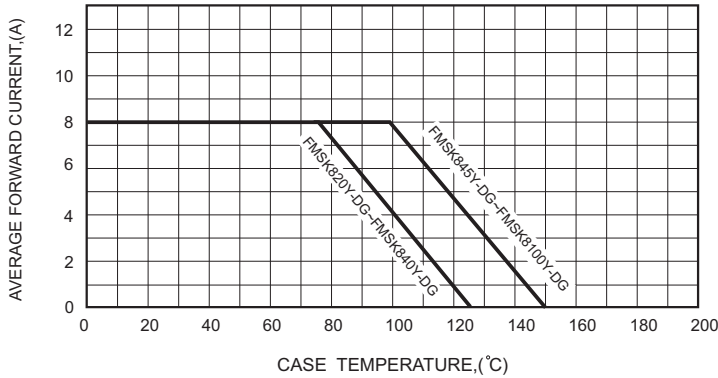


FIG.2-TYPICAL FORWARD CHARACTERISTICS

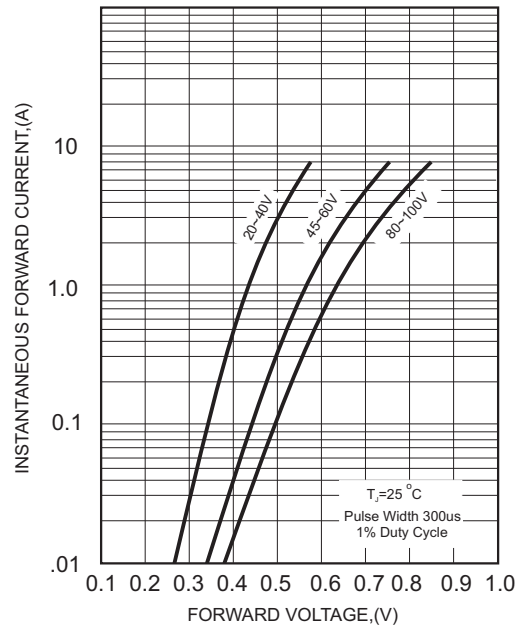


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

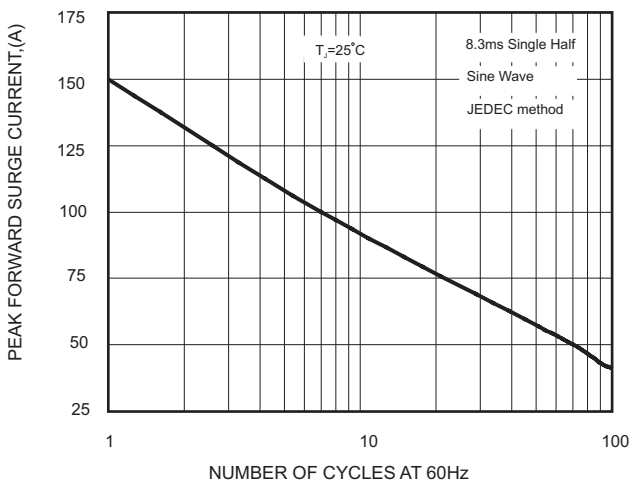


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

