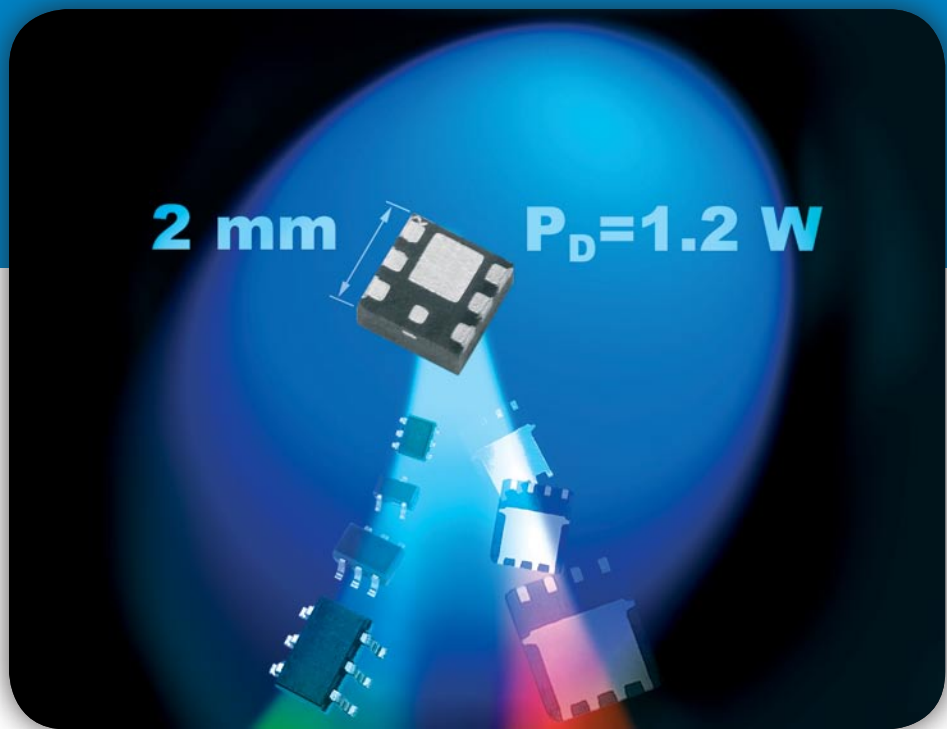


Power MOSFETs - PowerPAK® SC-70 and SC-75



Combining Advanced Thermal Conductivity, Excellent Electrical Performance and Ultimate Miniaturization

FEATURES

- Performance of bigger packages in smaller footprint
 - 55% smaller than TSOP-6 with better thermal performance and similar on-resistance
 - Pin compatible to TSOP-6 and SC-70 (PowerPAK SC-70), SC-75 and SC-89 (PowerPAK SC-75)
- Better performance than existing small footprints
 - Half the thermal impedance while more than half the on-resistance of the industry standard SC-70 and SC-75
 - Higher current density, higher power dissipation, increased junction temperature
 - Capable of larger die sizes
- Ultra-compact, leadless 2.0 mm x 2.1 mm (PowerPAK SC-70) & 1.6 mm x 1.6 mm (PowerPAK SC-75) outline and low 0.7 mm profile are ideal for space-constrained portable devices
- Single and dual configurations

For more information, visit our web site at www.vishay.com/ref/mosfets
Or send E-mail to: pmos.techsupport@vishay.com

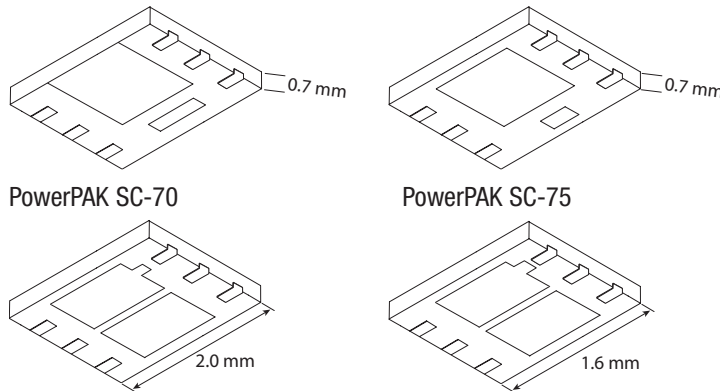
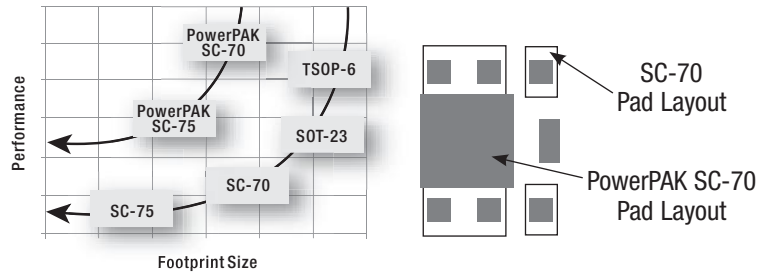


PowerPAK® SC-70 and SC-75 Package Family

Vishay Siliconix

APPLICATIONS

- Load switch for portable devices such as: mobile phones, notebooks and computers, PDAs, digital cameras, MP3 players
- Baseband switch for DC-DC



| | R_{thJA} (°C/W) | P_D (W) | Footprint (mm ²) | Profile (mm) |
|-----------------------|----------------------|-----------|---------------------------------|-----------------|
| SO-8 | 67 | 3 | 31 | 1.8 |
| TSSOP-8 | 95 | 1.75 | 20.5 | 1.2 |
| TSOP-6 | 90 | 2 | 9.2 | 1.1 |
| ChipFET® | 80 | 2.5 | 5.6 | 1.1 |
| SOT-23 | 120 | 1.25 | 8 | 1.1 |
| SC-70 | 100 | 1.56 | 5.3 | 1.1 |
| SC-75 | 600 | 0.25 | 2.7 | 0.8 |
| SC-89 | 600 | 0.3 | 2.9 | 0.6 |
| PowerPAK SC-70 | 80 | 2.2 | 4.2 | 0.8 |
| PowerPAK SC-75 | 100 | 1.9 | 2.6 | 0.8 |

EXAMPLE DEVICES*

| Part Number | V_{DS} (V) | V_{GS} (V) | $r_{DS(on)}$ @ $V_{GS}=4.5$ V (Ω) | $r_{DS(on)}$ @ $V_{GS}=2.5$ V (Ω) | $r_{DS(on)}$ @ $V_{GS}=1.8$ V (Ω) | Application | Samples |
|---------------------------------|-----------------|-----------------|--|--|--|--|---------|
| PowerPAK SC-70 | | | | | | | |
| SINGLE | | | | | | | |
| SiA401DJ | -12 | 8 | 0.04 | 0.047 | 0.058 | Load switch | Q404 |
| SiA405DJ | -20 | 12 | 0.045 | 0.064 | | Load switch, PA switch, battery switch, charger switch | Q105 |
| SiA402DJ | 20 | 8 | 0.035 | 0.04 | 0.048 | Load switch | Q404 |
| SiA403DJ | 20 | 8 | 0.042 | 0.053 | 0.067 | Load switch | Q404 |
| SiA443DJ | 20 | 12 | 0.065 | 0.085 | 0.113 | Load switch | Q404 |
| SINGLE WITH INTEGRATED SCHOTTKY | | | | | | | |
| SiA801DJ | -20 | 8 | 0.1 | 0.128 | 0.163 | Charger switch | Q105 |
| DUAL | | | | | | | |
| SiA901DJ | -12 | 8 | 0.097 | 0.121 | 0.156 | Load switch, PA switch, charger switch | Q404 |
| SiA903DJ | -20 | 8 | 0.106 | 0.141 | 0.185 | Load switch, PA switch, charger switch | Q404 |
| SiA902DJ | 12 | 8 | 0.055 | 0.064 | 0.081 | Load switch | Q105 |
| N&P PAIR | | | | | | | |
| SiA501DJ | 12 | 8 | 0.088 | 0.103 | 0.124 | Load switch | Q404 |
| | -12 | 8 | 0.097 | 0.121 | 0.158 | | |
| PowerPAK SC-75 | | | | | | | |
| SINGLE | | | | | | | |
| SiB401DK | -20 | 8 | 0.077 | 0.101 | 0.136 | Load switch | Q404 |
| SiB402DK | 20 | 8 | 0.052 | 0.058 | 0.071 | Load switch | Q105 |
| DUAL | | | | | | | |
| SiB901DK | -20 | 8 | 0.234 | 0.327 | 0.422 | Load switch, PA switch, battery switch | Q105 |
| LEVEL SHIFT | | | | | | | |
| SiB501DK | -8 | 8 | 0.238 | 0.352 | 0.527 | Level shift | Q404 |

* target specifications