

Product brief

Rad hard MOSFET technology

Advanced SupIR-SMD package QPLs now available

System designers are often challenged by making a reliable attachment of surface mount hermetic power packages to PCBs. Thermal expansion mismatch of the board and power package require unique solutions for extreme environment applications.

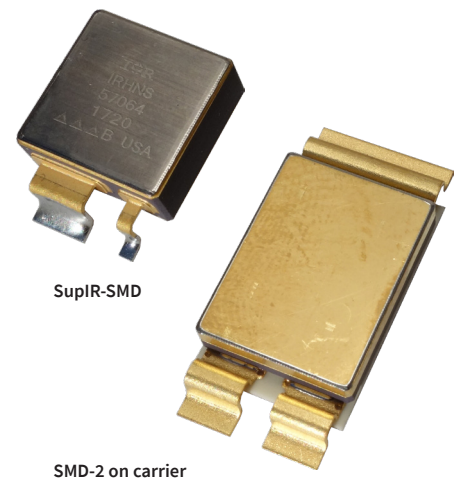
IR HiRel's SupIR-SMD package delivers a superior solution for thermal expansion and heat transfer. This package is JANS qualified in accordance with MIL-PRF-19500, the quality and reliability level required for space applications. The new package offers improved physical performance parameters compared to the nearest packaging solution, the SMD-2 package on a carrier. IR HiRel has performed board-level qualification testing of the SupIR-SMD, details of which are in [application note 1222](#).

Innovative packaging enables direct-to-PCB mounting

Feature	SMD-2 on carrier	SupIR-SMD	
Footprint	0.595 in ²	0.376 in ²	✓ 37% smaller
Mass	5.0g	3.1g	✓ 38% lighter
Current rating	75A	100A	✓ 33% higher
Thermal resistance	1.25°C/W	0.50°C/W	✓ 0.75°C/W lower
Electrical resistance	0.97mΩ	0.68mΩ	✓ 30% lower
Inductance	16nH	7nH	✓ 56% lower

Key features

- > U2A package nomenclature
- > Direct-to-PCB mounting
- > Smaller footprint
- > Higher power



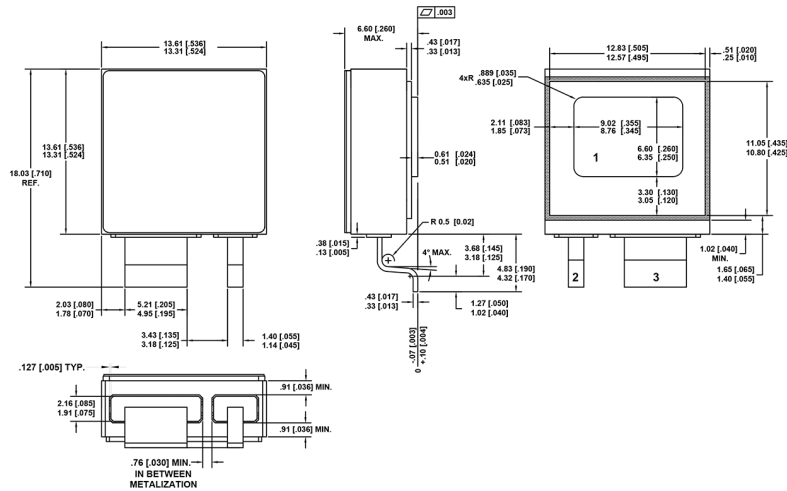
A pioneer in power electronics since 1947, IR HiRel is a leader in high-reliability, radiation-hardened power conversion solutions for space. For decades, customers have used IR HiRel's semiconductor-based power conversion and custom hybrid solutions in thousands of mission-critical space, aerospace, and national security programs. Applications range from satellite buses to space exploration vehicles and more, where failure-free performance is expected in extreme mechanical, thermal, and radiation environments. Our team of technical experts provides proven, high performance and high-reliability products that reduce development effort and risk for customers, paving the path for successful missions.

IR HiRel is an Infineon Technologies company. Together with our parent company, we offer a broad selection of solutions qualified to European Space Agency (ESA) and Defense Logistics Agency (DLA) standards for our global customers.

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SupIR-SMD package outline



Part number	V _{ds} (V)	Ch	I _d (A)	R _{DS(on)} (Ω)	Screening	JEDEC	Slash sheet
IRHNS67264	250	N	50	0.040	JANS	2N7585U2A	/760
IRHNS57264SE	250	N	45	0.060	JANS	2N7474U2A	/684
IRHNS67260	200	N	56	0.028	JANS	2N7583U2A	/760
IRHNS57260SE	200	N	53	0.038	JANS	2N7473U2A	/684
IRHNS67164	150	N	56	0.018	JANS	2N7581U2A	/760
IRHNS57163SE	130	N	75	0.0135	JANS	2N7472U2A	/684
IRHNS57160	100	N	75	0.012	JANS	2N7469U2A	/673
IRHNS67160	100	N	56	0.010	JANS	2N7579U2A	/760
IRHNS57064	60	N	75	0.0056	JANS	2N7468U2A	/673
IRHNS57Z60	30	N	75	0.0035	JANS	2N7467U2A	/683
IRHNS597Z60	-30	P	56	0.013	JANS	2N7523U2A	/733
IRHNS597064	-60	P	56	0.016	JANS	2N7524U2A	/733
IRHNS597160	-100	P	47	0.049	JANS	2N7550U2A	/713
IRHNS597260	-200	P	33	0.102	JANS	2N7549U2A	/713

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