

Thermal Consideration

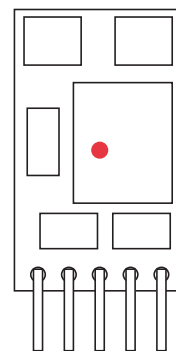
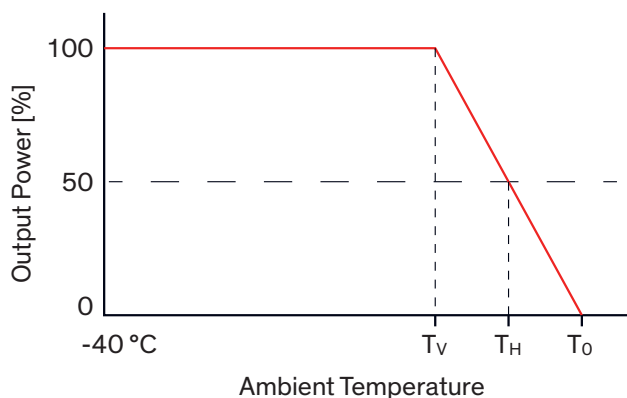
Environment temperature

It is a physical condition that power conversion over a galvanic isolation comes along with some power loss. This power loss is transformed to heat which might reduces the lifetime of electronic components.

It is our design guideline to use best resistant components and to optimize the dissipation of internal heat. But please take in consideration that the environment has an impact on the heat exchange process and the heat emission of the DC/DC converter can have an impact on other components nearby. Avoid heat accumulation!

Operating temperature range is typically specified for an ambient with free air convection (20 LFM). If free air convection is not given it is recommended to simulate the worst case condition (concerning environment temperature and power) and measure the temperature at the point as per drawing.

Operating temperature ranges and power derating with natural convection and forced air cooling



The temperature at this point should not exceed 100°C in the application.

	@ 20LFM		@ 100LFM		@ 200LFM		@ 500LFM		
Model (@ adjustable V _{out})	T_V	T_H	T_V	T_H	T_V	T_H	T_V	T_H	T₀
TSR 3-0533 @ 0.6VDC	92	96	100	100	100	100	100	100	100
TSR 3-0533 @ 2.5VDC	91	95	99	100	100	100	100	100	100
TSR 3-0533 @ 3.3VDC	90	94	98	99	100	100	100	100	100
TSR 3-1250 @ 0.59VDC	81	91	98	99	100	100	100	100	100
TSR 3-1250 @ 3.3VDC	77	88	91	95	96	98	99	100	100
TSR 3-1250 @ 6VDC	73	86	87	94	94	97	97	99	100
TSR 3-1250 @ -0.59VDC	90	95	100	100	100	100	100	100	100
TSR 3-1250 @ -3.3VDC	74	87	88	94	96	98	99	100	100
TSR 3-1250 @ -6VDC	65	83	82	91	90	95	94	97	100
TSR 3-2450 @ 3VDC	39	69	68	84	82	91	86	93	100
TSR 3-2450 @ 5VDC	36	68	66	83	80	90	85	92	100
TSR 3-2450 @ 6VDC	30	65	62	81	78	89	84	92	100
TSR 3-2450 @ -3VDC	49	75	70	85	82	91	86	93	100
TSR 3-2450 @ -5VDC	30	65	60	80	75	87	80	90	100
TSR 3-2450 @ -6VDC	21	60	55	78	70	85	76	88	100
TSR 3-24150 @ 5VDC	30	65	61	81	76	88	82	91	100
TSR 3-24150 @ 12VDC	20	60	55	77	71	85	78	89	100
TSR 3-24150 @ 15VDC	22	61	56	78	72	86	78	89	100
TSR 3-24150 @ -5VDC	53	66	74	87	84	92	88	94	100
TSR 3-24150 @ -12VDC	10	55	47	73	62	81	69	84	100
TSR 3-24150 @ -15VDC	2	51	32	66	51	75	59	79	100