

## *MDS70*

70 Watts, 50 Volts, Pulsed Avionics 1030 - 1090MHz

GEN The MD MODE has gold includes package	ERAL DESCRIPTION S70 is a COMMON BASE bipolar tr S pulsed systems in the frequency bar thin-film metallization for proven hig input prematch for broadband capaci reduces junction temperature, extend OLUTE MAXIMUM R	ansistor. It is designed for d 1030-1090 MHz. The device thest MTTF. The transistor ty. Low thermal resistance s life.	CASE OUTLINE 55CX, STYLE 1
Maximu	m Power Dissipation @ 25°C <sup>2</sup>	225 Watts	
Maxim	Im Voltage and Current		
BVces	Collector to Base Voltage	65 Volts	
<b>BVebo</b>	Emitter to Base Voltage	3.5 Volts	
<b>D</b> 1000	Collector Current	50 Amps	
Ic		5.0 mps	
Ic Maximu	Im Temperatures	5.67 Milps	
Ic Maximu Storage	<b>Im Temperatures</b> Temperature	- 65 to + 150°C	

## ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	ТҮР	MAX	UNITS
Pout	Power Out	F = 1030-1090 MHz	70		95	Watts
Pg	Power Gain	Vcc = 50 Volts Bin = 6.5W	10.3		11.65	dB
RT	Rise Time	FIII = 0.5  W			80	ns
η <sub>c</sub>	Collector Efficiency	Pulse Mod: Mode S	35			%
VSWR <sup>1</sup>	Load Mismatch Tolerance	1090 MHz	5:1			

BVebo	Emitter to Base Breakdown	Ie = 5 mA	3.5		Volts
BVces	Collector to Emitter Breakdown	Ic = 25 mA	65		Volts
h <sub>FE</sub>	DC - Current Gain	Ic = 500  mA, Vce = 5  V	20		
θjc <sup>1</sup>	Thermal Resistance			0.8	°C/W

Notes: 1) At rated pulse conditions2) Mode S Burst: 0.5us (on/off), N=128, Per=6.4ms; LTDC=1%Rev C: August 20102) Mode S Burst: 0.5us (on/off), N=128, Per=6.4ms; LTDC=1%

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## **MDS70 IMPEDANCE DATA:**

FREQUENCY	Z <sub>source</sub> (ohms)	Z <sub>load</sub> (ohms)
1030	3.0 – j4.8	5.3 – j1.2
1090	2.8 – j4.5	6.2 – j1.2



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