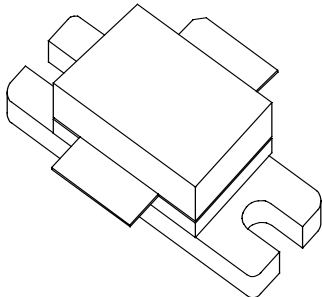


ITC1100

1000 WATT, 50V, Pulsed Avionics 1030 MHz

<p>GENERAL DESCRIPTION</p> <p>The ITC1100 is a common base bipolar transistor. It is designed for pulsed interrogator systems in the frequency band of 1030 MHz. The device has gold thin-film metallization for proven high MTF. The transistor includes input returns for improved output rise time. Low thermal resistance package reduces junction temperature which extends the life time of the product.</p>	<p>CASE OUTLINE 55SW, Style 1 Common Base</p> 
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Power Dissipation</p> <p>Device Dissipation¹ @25°C (P_d) 3400 W Thermal Resistance¹ (θ_{JC}) .08°C/W</p> <p>Voltage and Current</p> <p>Collector-Base Voltage 65V Emitter-Base Voltage 3.5V Collector Current¹ 80A</p> <p>Temperatures</p> <p>Storage Temperature -40 to +150°C Operating Junction Temperature¹ +200°C</p>	

ELECTRICAL CHARACTERISTICS @ 25°C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
BV _{ebo} ²	Emitter-Base Breakdown(open)	I _e =50mA	3.5			V
BV _{ces}	Collector-Emitter Breakdown(shorted)	I _c =30mA	65			V
BV _{ceo} ²	Collector-Emitter Breakdown (open)	I _c =30mA	30			V
h _{FE} ²	DC Current Gain	I _c =5A, V _{ce} =5V	20		100	β

FUNCTIONAL CHARACTERISTICS @ 25°C

G _{PB}	Common Base Power Gain	V _{cc} = 50V, F = 1030MHz, P _{out} =1000W Peak Min, PW=1μS, DF=1%	10	10.5		dB
η _c	Collector Efficiency	V _{cc} = 50V, F = 1030MHz, P _{out} =1000W Peak Min, PW=1μS, DF=1%	45	50		%
t _r	Rise Time	V _{cc} = 50V, F = 1030MHz, P _{out} =1000W Peak Min, PW=1μS, DF=1%		50	80	nS
VSWR	Output Load Mismatch	V _{cc} = 50V, F = 1030MHz, P _{out} =1000W Peak Min, PW=1μS, DF=1%			4:1	Ψ
Z _{in}	Series Input Impedance (Circuit source impedance @ test cond.)	V _{cc} = 50V, F = 1030MHz, P _{out} =1000W Peak Min, PW=1μS, DF=1%	0.89 – j2.3			Ω
Z _{out}	Series Output Impedance (Circuit load impedance @ test cond.)	V _{cc} = 50V, F = 1030MHz, P _{out} =1000W Peak Min, PW=1μS, DF=1%	0.54 - j2.64			Ω

¹ At rated output power and pulse conditions

² Not measurable due to EB Returns

