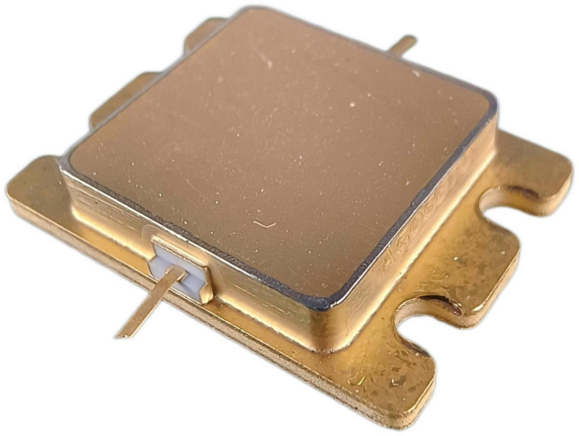
MCCI5867-P45-1

C-Band Internally Matched GaAs Device

Key Features

- Operating Frequency: 5.80~6.70 GHz
- P_{1dB} ≥ 45 dBm
- Power Gain(Gp): ≥ 10.0dB
- Efficiency (η): ≥ 35%
- Port Matching: Zin/Zout = 50 Ω



Product Description

The MCCI5867-P45-1 is a internal matching GaAs device, which adopts advanced co-planar internal matching MCM and thin film circuit technology.The typical working frequency range is 5.80~6.70GHz.
This device can be used in different RF/Microwave system and subsystem.The high output power,high efficiency and wide temperature range can make application very flexible.

Absolute Maximum Ratings（Tc=25°C）

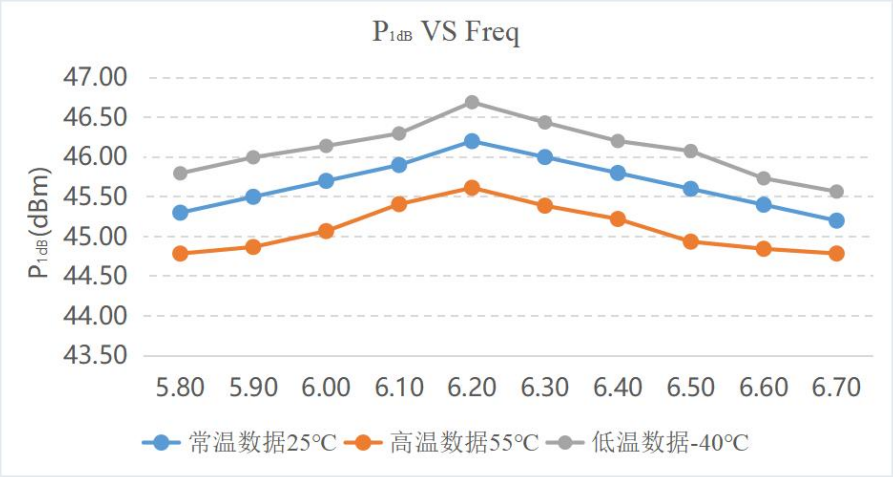
Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	11	V
Gate-Source Voltage	V_{GS}	-5	V
Storage Temperature	T_{stg}	-65 to +150	℃
Channel Temperature	T_{ch}	150	℃

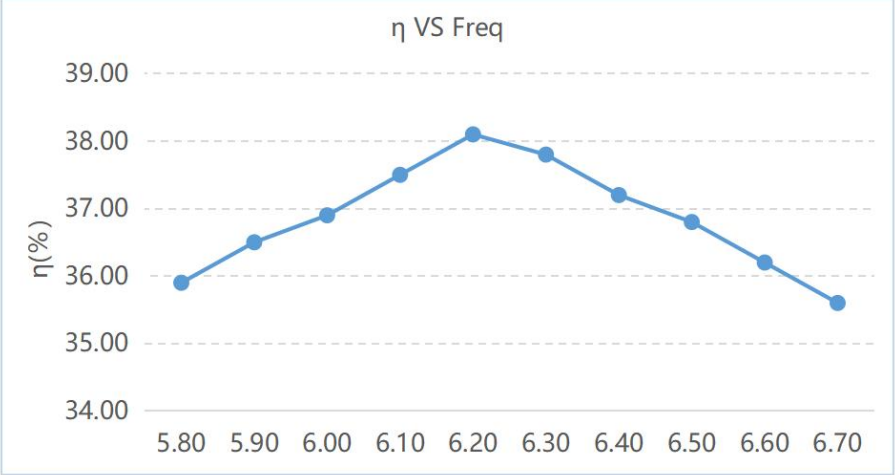
***Not recommended to work under these conditions.**

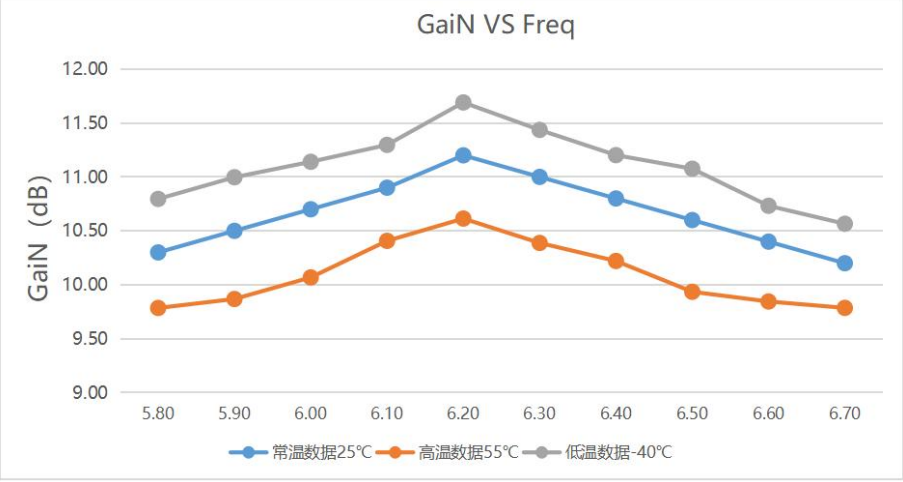
Microwave Electrical Characteristics

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Drain Current	I_{dsr}	VDS:10V CW Pin：35dBm Freq：5.8~6.7GHZ	-	9	-	A
Output Power at 1dB	P_{1dB}		45	-	-	dBm
Power Gain	G_p		10	-	-	dB
Work Efficiency	η		35	-	-	%
Gain Flatness	ΔG		-0.8	-	0.8	dB

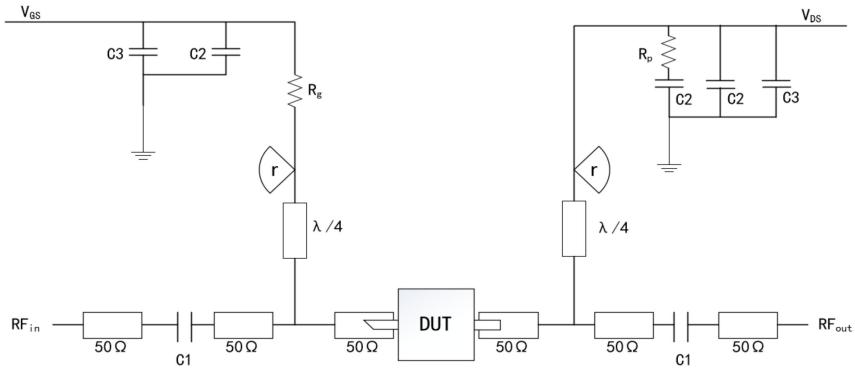
Typical Curves







Recommended Application Circuit



DUT: Device Under Test

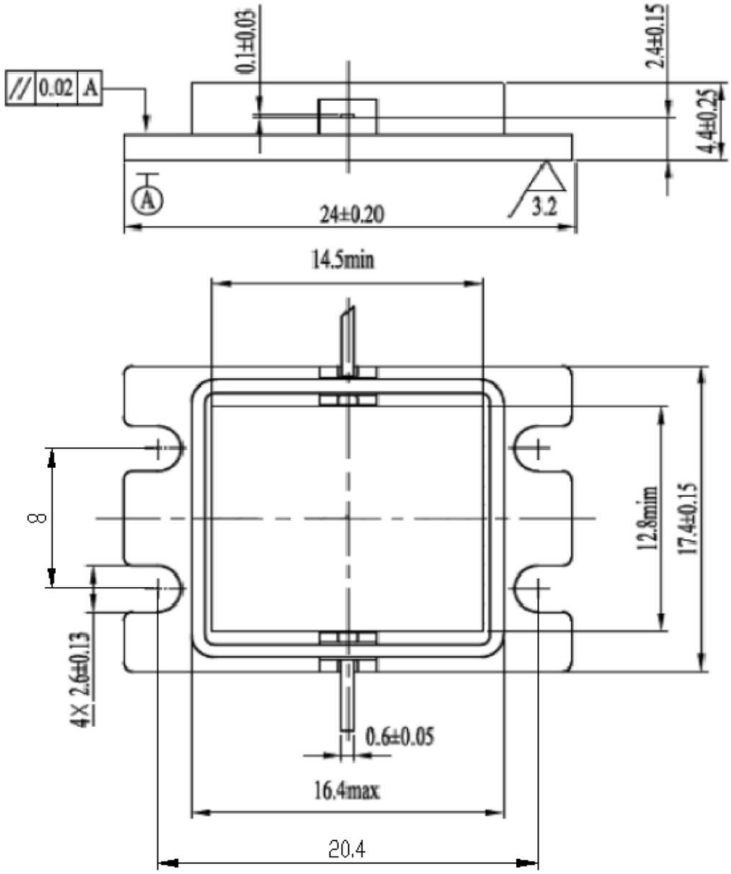
C1:3pF
C2:1000pF
C3:100uF
Rp:51Ω
Rg:15Ω

Radius ≈ 4.5mm (Rogers 5880, 20 mil)

ESD Level

ESD	Class III	2000V

Overall Dimensions



Using Notes:

- During transportation and storage,ensure proper drying.
- During the use and assembly of the chip, take precautions against static electricity. Wear a grounded anti-static wristband.
- When powering on, apply gate voltage first, then apply leakage voltage.