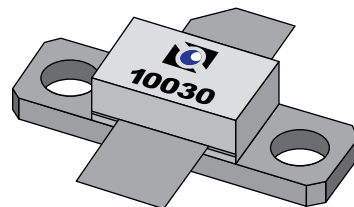


General description:

The **XMT-10030** is an N-Channel enhancement-mode MOSFET featuring XeMOS® RF technology. It has been designed to provide high gain with a high degree of linearity at RF frequencies up to 1.0 GHz, and is usable at higher frequencies at lower gain.

**Maximum Ratings**

Rating	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	65	Vdc
Gate-Source Voltage	V_{GS}	± 20	Vdc
Storage Temperature Range	T_{stg}	-65 to +150	°C
Operating Junction Temperature	T_J	200	°C

Characteristics ($T_C = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	—	—	1.75	°C/W
Drain-Source Breakdown Voltage ($V_{GS} = 0$, $I_D = 5.0$ mAdc)	$V_{(BR)DSS}$	65	—	—	Vdc
Zero Gate Voltage Drain Current ($V_{DS} = 28\text{V}$, $V_{GS} = 0$)	I_{DSS}	—	—	1	mAdc
Gate Source Leakage Current ($V_{GS} = 20\text{V}$, $V_{DS} = 0$)	I_{GSS}	—	—	2	μAdc
Gate Threshold Voltage ($V_{DS} = 10\text{V}$, $I_D = 20$ mA)	$V_{GS(th)}$	2	3	5	Vdc
Drain-Source On-Voltage ($V_{GS} = 10\text{V}$, $I_D = 1\text{A}$)	$V_{DS(on)}$	—	0.9	1.2	Vdc

(Continued on following page)

XEMOD RESERVES THE RIGHT TO MAKE CHANGES TO THIS SPECIFICATION WITHOUT FURTHER NOTICE. BEFORE THE PRODUCT(S) DESCRIBED HEREIN ARE WRITTEN INTO SPECIFICATIONS OR USED IN CRITICAL APPLICATIONS, THE PERFORMANCE CHARACTERISTICS SHOULD BE VERIFIED BY CONTACTING THE FACTORY.

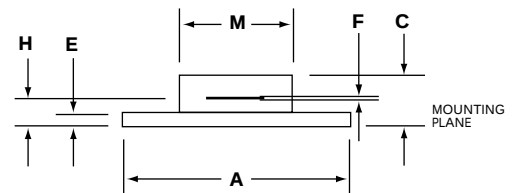
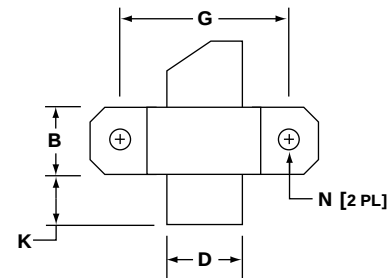
CAUTION: MOS devices are susceptible to damage from electrostatic charge. The user should exercise reasonable precautions in handling and packaging.

Characteristics (T_C = 25°C unless otherwise noted)

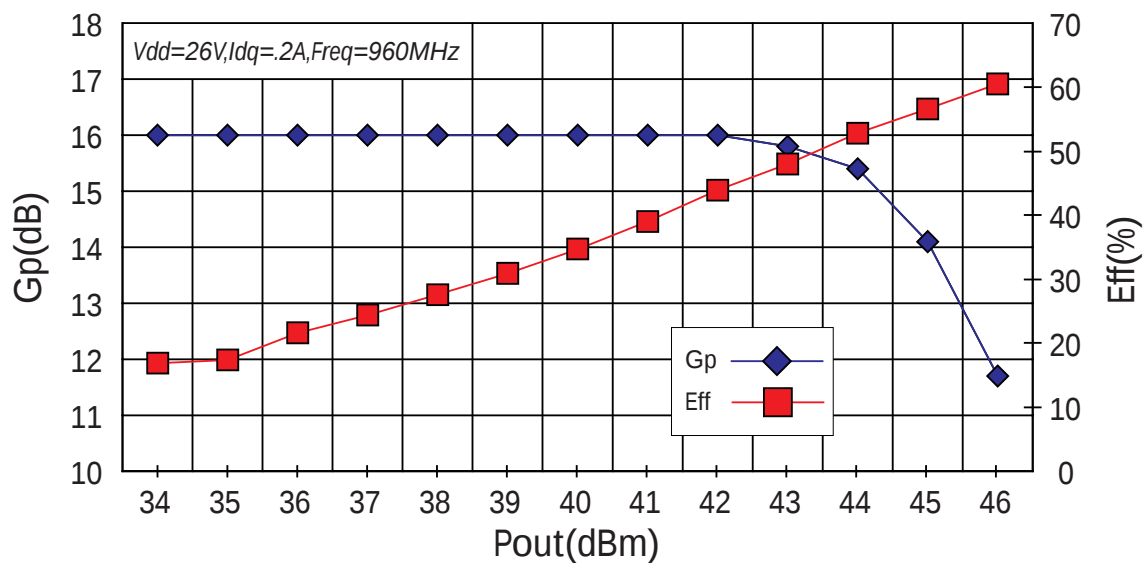
Characteristic	Symbol	Min	Typ	Max	Unit
Forward Transductance (V _{DS} = 10V, I _D = 1A)	g_{fs}	1.6	2.0	—	S
Input Capacitance (V _{DS} = 28V, V _{GS} = 0, f = 1 MHz)	C_{iss}	—	56	—	pF
Output Capacitance (V _{DS} = 28, V _{GS} = 0, f = 1 MHz)	C_{oss}	—	26	—	pF
Reverse Transfer Capacitance (V _{DS} = 28V, V _{GS} = 0, f = 1 MHz)	C_{rss}	—	2.5	—	pF
Common Source Power Gain (V _{DD} = 26Vdc, P _{out} = 30W, I _{DQ} = 200 mA, f = 960 MHz)	G_{ps}	13	15	—	dB
Drain Efficiency (V _{DD} = 26Vdc, P _{out} = 30W, I _{DQ} = 200 mA, f = 960 MHz)	η	45	55	—	%
Load Mismatch (V _{DD} = 26Vdc, P _{out} = 30W, I _{DQ} = 200 mA, f = 960 MHz) Load VSWR 5:1 at All Phase Angles)	ψ	No Degradation in Output Power			

PACKAGE DIMENSIONS—PACKAGE B01

Dimension	Inches		Millimeters	
	Min.	Max	Min.	Max
A (package length)	0.790	0.810	20.07	20.57
B (package width)	0.220	0.240	5.59	6.09
C (package height)	0.140	0.160	3.56	4.07
D (lead width)	0.205	0.225	5.21	5.71
E (flange thickness)	0.035	0.050	0.18	0.23
F (lead thickness)	0.007	0.009	0.20	0.25
G (hole spacing)	0.555	0.565	14.10	14.36
H (lead height)	0.055	0.070	2.29	2.79
K (lead length)	0.215	0.255	5.47	6.47
M (ceramic length)	0.350	0.370	8.89	9.39
N (hole diameter)	0.120	0.140	3.05	3.55
Controlling dimension = inches				



Gain & Efficiency vs Power Output XMT-10030



CDMA Spectral Regrowth vs Power Output XMT-10030

