

# VHF POWER MOSFET

**DESCRIPTION:**

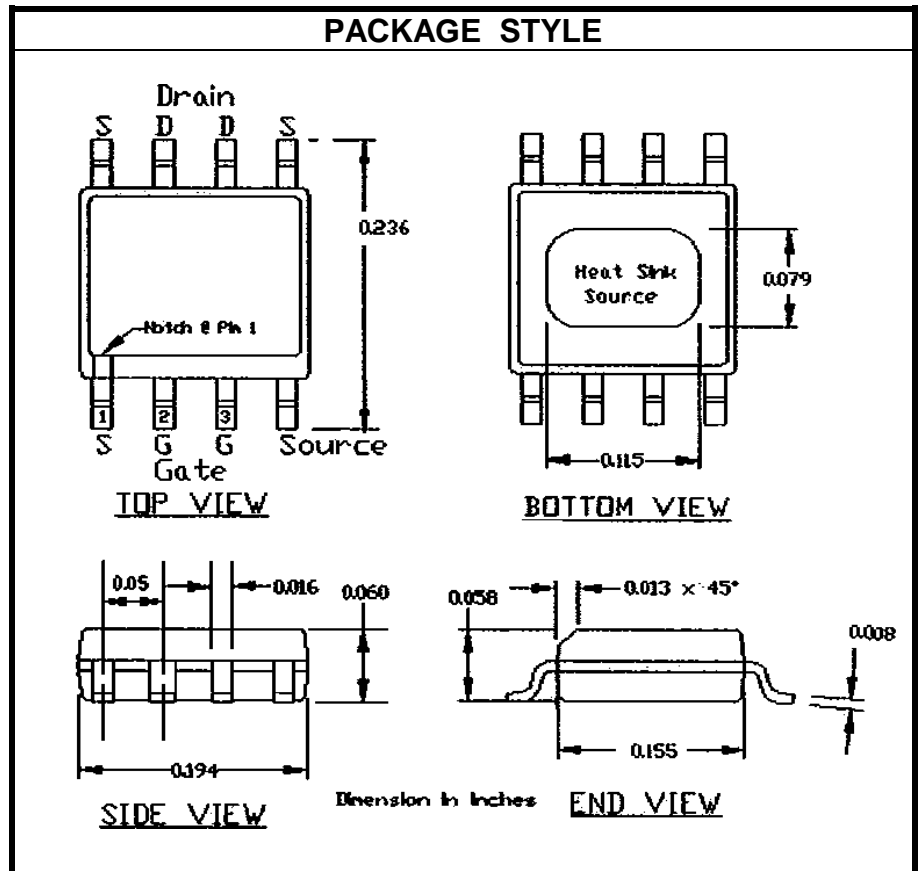
The **ASI MRF5003** is common source device, designed for broadband amplifier applications at frequencies to 520 MHz.

**FEATURES:**

- $P_G = 9.5 \text{ dB @ } 3.0 \text{ W } 512 \text{ MHz}$
- Surface mount package

**MAXIMUM RATINGS**

$I_D$	8.0 A
$V_{DSS}$	36 V
$V_{GS}$	$\pm 20 \text{ V}$
$P_{DISS}$	60 W @ $T_C = 25^\circ \text{C}$
$T_J$	$-65^\circ \text{C}$ to $+150^\circ \text{C}$
$T_{STG}$	$-65^\circ \text{C}$ to $+150^\circ \text{C}$
$\theta_{JC}$	$2.08^\circ \text{C/W}$


**CHARACTERISTICS**  $T_C = 25^\circ \text{C}$ 

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
$BV_{DSS}$	$I_D = 200 \mu\text{A}$	36			V
$I_{DSS}$	$V_{DS} = 7.5 \text{ V}$ $V_{GS} = 0 \text{ V}$			2.0	mA
$I_{GSS}$	$V_{DS} = 0 \text{ V}$ $V_{GS} = 30 \text{ V}$			1.0	$\mu\text{A}$
$V_{GS}$	$I_D = 200 \mu\text{A}$ $V_{GS} = V_{DS}$	1.0		7.0	V
$gM$	$V_{DS} = 10 \text{ V}$ $V_{GS} = 5.0 \text{ V}$		1.7		Mho
$R_{SON}$	$I_{DS} = 8.0 \text{ A}$ $V_{GS} = 20 \text{ V}$		0.40		$\Omega$
$I_{DSAT}$	$V_{DS} = 10 \text{ V}$ $V_{GS} = 20 \text{ V}$		13		A



$C_{iss}$ $C_{oss}$ $C_{rss}$	$V_{DS} = 7.5 V$ $V_{GS} = 0 V$ $f = 1.0 MHz$		50 40 2.0		pF
$G_{ps}$ $\eta$ VSWR	$V_{DS} = 7.5 V$ $I_{DQ} = 400 Ma$ $f = 500 MHz$	10	50	5:1	dB % ---