

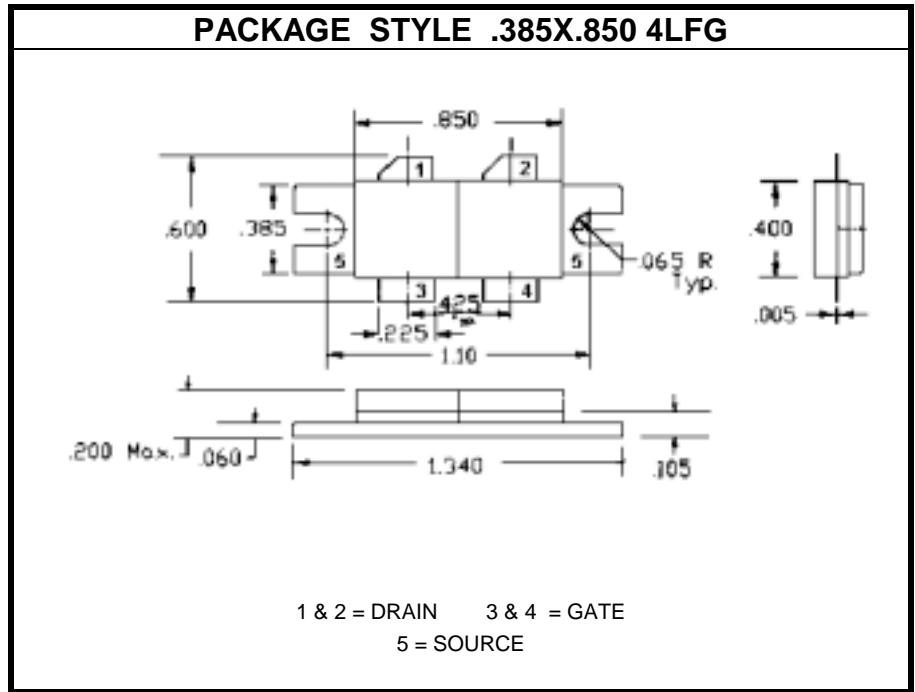
RF FIELD-EFFECT POWER TRANSISTOR

DESCRIPTION:

The **ASI MRF141G** is a Dual Common Source N-Channel Enhancement-Mode MOSFET RF Power Transistor, Designed for 175 MHz, 300 W Transmitter and Amplifier Applications.

MAXIMUM RATINGS

I_D	32 A
V_{DSS}	65 V
V_{GS}	± 40 V
P_{DISS}	500 W @ $T_C = 25^\circ\text{C}$
T_J	-65°C to $+200^\circ\text{C}$
T_{STG}	-65°C to $+200^\circ\text{C}$
θ_{JC}	0.35°C/W


CHARACTERISTICS / EACH SIDE $T_C = 25^\circ\text{C}$

SYMBOL	TEST CONDITIONS	MINIMUM	TYPICAL	MAXIMUM	UNITS
BV_{DSS}	$I_D = 100$ mA	65			V
I_{DSS}	$V_{DS} = 28$ V $V_{GS} = 0$ V			5.0	mA
I_{GSS}	$V_{DS} = 0$ V $V_{GS} = 20$ V			1.0	μA
$V_{GS(th)}$	$I_D = 100$ mA $V_{DS} = 10$ V	1.0		5.0	V
$V_{DS(on)}$	$I_D = 10$ A $V_{GS} = 10$ V			1.5	V
g_{fs}	$I_D = 5.0$ A $V_{DS} = 10$ V	5.0			mhos
C_{iss} C_{oss} C_{rss}	$V_{DS} = 28$ V $V_{GS} = 0$ V $f = 1.0$ MHz		350 420 40		pF
G_{ps} push-pull	$V_{DD} = 28$ V $I_{DQ} = 500$ mA $P_{out} = 300$ W $f = 175$ MHz	12			dB
η push-pull	$V_{DD} = 28$ V $I_{D(max)} = 21.4$ A $P_{out} = 300$ W $f = 175$ MHz	45			%
ψ push-pull	$V_{DD} = 28$ V $I_{DQ} = 500$ mA $P_{out} = 300$ W $f = 175$ MHz $V_{SWR} = 5:1$ AT ALL PHASE ANGLES	NO DEGRADATION IN OUTPUT POWER			

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