



PD57060S

RF POWER TRANSISTORS

The *LdmoST* Plastic FAMILY

TARGET DATA

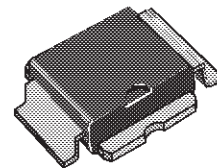
N-CHANNEL ENHANCEMENT-MODE LATERAL MOSFETs

- EXCELLENT THERMAL STABILITY
- COMMON SOURCE CONFIGURATION
- $P_{OUT} = 60\text{ W}$ with 13 dB gain @ 945 MHz / 28V
- NEW RF PLASTIC PACKAGE

DESCRIPTION

The PD57060S is a common source N-Channel, enhancement-mode lateral Field-Effect RF power transistor. It is designed for high gain, broad band commercial and industrial applications. It operates at 28 V in common source mode at frequencies of up to 1 GHz. PD57060S boasts the excellent gain, linearity and reliability of ST's latest LDMOS technology mounted in the first true SMD plastic RF power package, PowerSO-10RF. PD57060S's superior linearity performance makes it an ideal solution for base station applications.

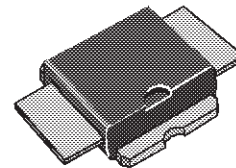
The PowerSO-10 plastic package, designed to offer high reliability, is the first ST JEDEC approved, high power SMD package. It has been specially optimized for RF needs and offers excellent RF performances and ease of assembly.



PowerSO-10RF
(formed lead)

ORDER CODE
PD57060

BRANDING
XPD57060



PowerSO-10RF
(Straight lead)

ORDER CODE
PD57060S

BRANDING
XPD57060S

ABSOLUTE MAXIMUM RATINGS ($T_{CASE} = 25^{\circ}\text{C}$)

Symbol	Parameter	Value	Unit
$V_{(BR)DSS}$	Drain-Source Voltage	65	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Drain Current	7	A
P_{DISS}	Power Dissipation (@ $T_c = 70^{\circ}\text{C}$)	108	W
T_j	Max. Operating Junction Temperature	200	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	-65 to +150	$^{\circ}\text{C}$

THERMAL DATA

$R_{th(j-c)}$	Junction -Case Thermal Resistance	1.2	$^{\circ}\text{C/W}$
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ELECTRICAL SPECIFICATION ($T_{CASE} = 25^{\circ}C$)

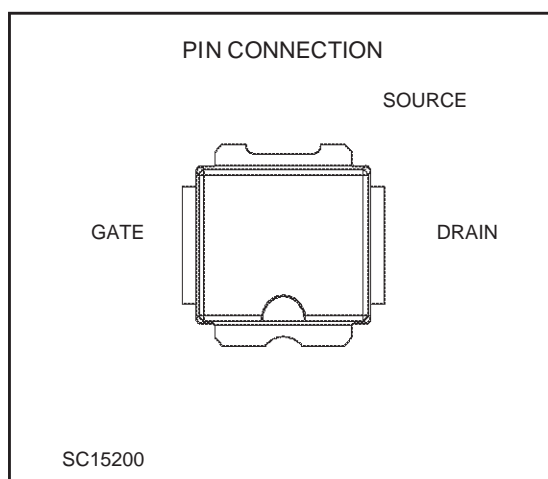
STATIC (Per Section)

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
$V_{(BR)DSS}$	$V_{GS} = 0\text{ V}$	$I_{DS} = 1\text{ mA}$	65			V
I_{DSS}	$V_{GS} = 0\text{ V}$	$V_{DS} = 28\text{ V}$			1	μA
I_{GSS}	$V_{GS} = 20\text{ V}$	$V_{DS} = 0\text{ V}$			1	μA
$V_{GS(Q)}$	$V_{DS} = 28\text{ V}$	$I_D = 100\text{ mA}$	2.0		5.0	V
$V_{DS(ON)}$	$V_{GS} = 10\text{ V}$	$I_D = 3\text{ A}$		0.7	0.8	V
G_{FS}	$V_{DS} = 10\text{ V}$	$I_D = 3\text{ A}$	2.5			mho
C_{ISS}^*	$V_{GS} = 0\text{ V}$	$V_{DS} = 28\text{ V}$		88		pF
C_{OSS}	$V_{GS} = 0\text{ V}$	$V_{DS} = 28\text{ V}$		44		pF
C_{RSS}	$V_{GS} = 0\text{ V}$	$V_{DS} = 28\text{ V}$		1.7		pF

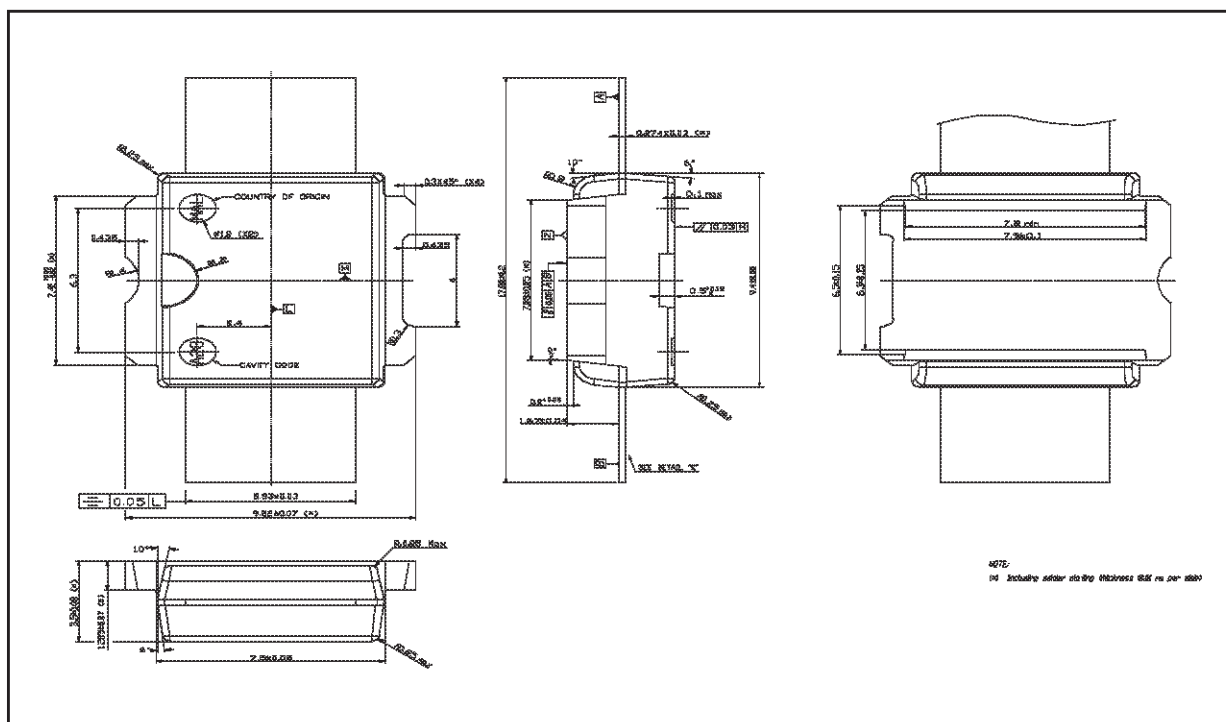
Ref. 7143417B

DYNAMIC

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
P_{OUT}	$V_{DD} = 28\text{ V}$	$I_{DQ} = 100\text{ mA}$ $f = 945\text{ MHz}$	60			W
G_{PS}	$V_{DD} = 28\text{ V}$	$I_{DQ} = 100\text{ mA}$ $P_{OUT} = 60\text{ W}$ $f = 945\text{ MHz}$	13			dB
η_D	$V_{DD} = 28\text{ V}$	$I_{DQ} = 100\text{ mA}$ $P_{OUT} = 60\text{ W}$ $f = 945\text{ MHz}$	53			%
Load mismatch	$V_{DD} = 28\text{ V}$	$I_{DQ} = 100\text{ mA}$ $P_{OUT} = 60\text{ W}$ $f = 945\text{ MHz}$ ALL PHASE ANGLES	5:1			VSWR



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