

### Product Features

- Up to 15GHz Operation
- 14.0dB Typical Small Signal Gain at 4.7GHz
- 15W Typical  $P_{SAT}$  at 4.7GHz
- High Efficiency
- Reliability Monitoring Supporting (Opti
- 28V Operation

### Applications

- U/VHF Amplifiers
- Broadband Amplifiers
- Base Station Communications
- Drone, UAV
- WiMAX, LTE, WCDMA, GSM
- Radar Application



Package Type: 360BS

### Absolute Maximum Rating (TA=25°C)

Parameter	Symbol	Typical Value	Units	Conditions
Threshold voltage @ $I_d=1\text{mA/mm}$ , $V_d=10\text{V}$	$V_{to}$	-3.2	V	25°C
Breakdown voltage @ $I_d=1\text{mA/mm}$	$V_{DG}$	>100	V	25°C
Drain-source current, $I_d$ @ $V_d=10\text{V}$ , $V_g=0$	$I_{dss}$	880	mA/mm	25°C
Operating Junction Temperature	$T_J$	225	°C	
Storage Temperature	$T_{STG}$	-65, +150	°C	
Thermal Resistance, Junction to Case (packaged)	$R_{\theta JC}$		°C/W	
Thermal Resistance, Junction to Case (die only)	$R_{\theta JC}$		°C/W	
Mounting Temperature (30 seconds)	$T_S$	320	°C	30 seconds

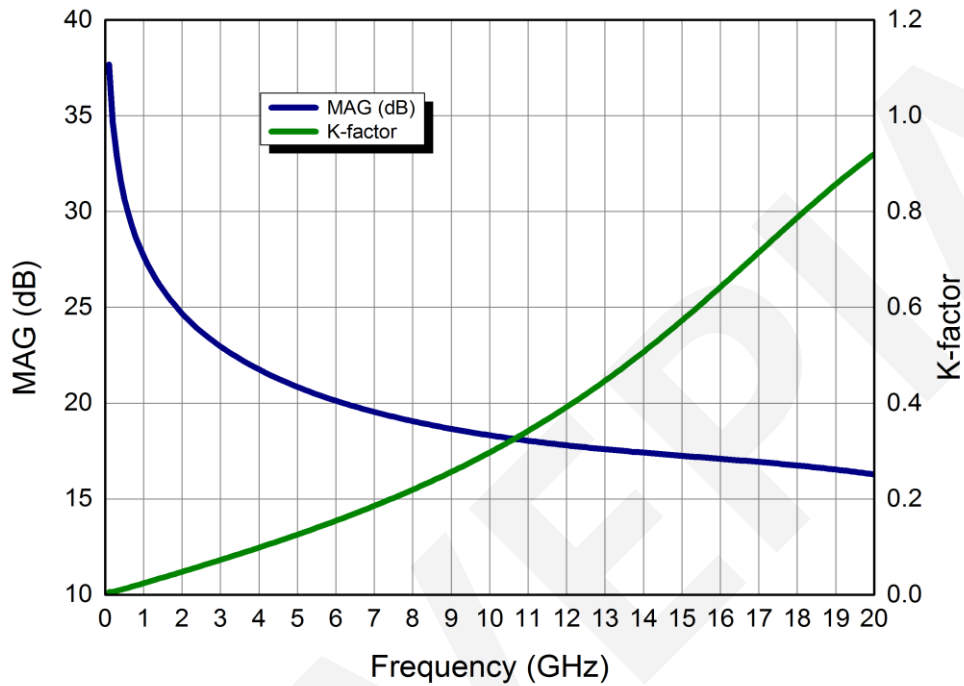
### DC Characteristics<sup>1</sup> (Frequency = 4.7GHz unless otherwise stated, TA=25°C)

Parameter	Symbol	Typical Value	Units	Conditions
Ohmic contact resistance	RC	0.4	Ohm-mm	25°C
Maximum Drain-source current, $I_d$ @ $V_d=10\text{V}$ , $V_g=1\text{V}$ (1X125 $\mu\text{m}$ device)	$I_{dmax}$	1050	mA/mm	25°C
Max. trans-conductance, @ $V_d=10\text{V}$ , $V_g=-4\text{V} \sim -1\text{V}$ (1X125 $\mu\text{m}$ device)	GM_PEAK	340	mS/mm	25°C
Maximum Drain-source current, $I_d$ @ $V_d=10\text{V}$ , $V_g=1\text{V}$ (1X125 $\mu\text{m}$ device)	$I_{dmax}$	1000	mA/mm	25°C

### RF Characteristics (Frequency = 4.7GHz unless otherwise stated, TA=25°C)

Parameter	Symbol	Typical Value	Units	Conditions
Small Signal Gain	$G_{SS}$	>14	dB	$V_{DD}=28\text{V}$ , $I_{DQ}=300\text{mA}$
Saturated Power Output	$P_{SAT}$	15	W	$V_{DD}=28\text{V}$ , $I_{DQ}=300\text{mA}$
Drain Efficiency	$\eta$	>60	%	$V_{DD}=28\text{V}$ , $I_{DQ}=300\text{mA}$
Intermodulation Distortion	IM3	<-30	dBc	$V_{DD}=28\text{V}$ , $I_{DQ}=300\text{mA}$
Output Mismatch Stress	vSWR	10:1	$\psi$	

**Simulated Maximum Available Gain (MAG) and K Factor of the WP28015015UH(S)**  
 VDD=28V, IDQ=300mA



**Intrinsic die parameters – reference planes at centers of gate and drain bonding pads.  
 No wire bonds assumed.**

**Simulated Minimum Noise Figure of the WP28015015UH(S)**  
 VDD=28V, IDQ=300mA

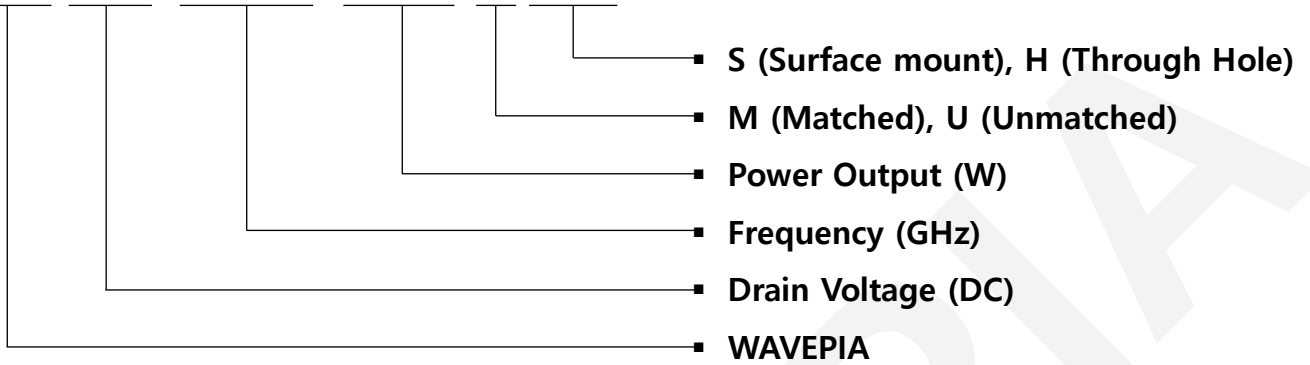
Will be Updated





### Part Number System

**W P 2 8 0 1 5 0 1 5 U H / S**



Parameter	Value	Units
Drain Voltage	28	V
Lower Frequency	DC	GHz
Upper Frequency	15	GHz
Output Power	15	W
Transistor Type	Unmatched	-
Package	S: Surface mount H: Through hole	-