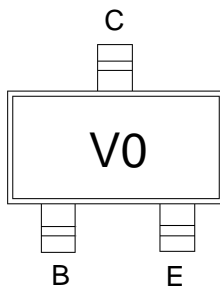


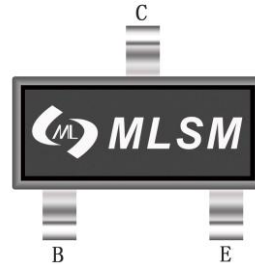
**Features**

- Low Noise and High Gain
- High Power Gain

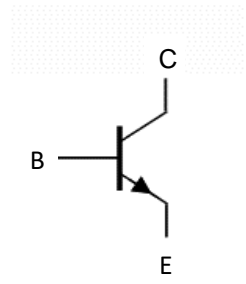


Marking and pin assignment

V0:Device Code



SOT-23 top view



Schematic diagram



Pb-Free



RoHS



Halogen-Free

**Maximum Ratings( $T_a=25^{\circ}\text{C}$  unless otherwise noted)**

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	20	V
$V_{CEO}$	Collector-Emitter Voltage	10	V
$V_{EBO}$	Emitter-Base Voltage	1.5	V
$I_C$	Collector Current	50	mA
$P_C$	Collector Power Dissipation	360	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	347	$^{\circ}\text{C}/\text{W}$
$T_J, T_{stg}$	Operation Junction and Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

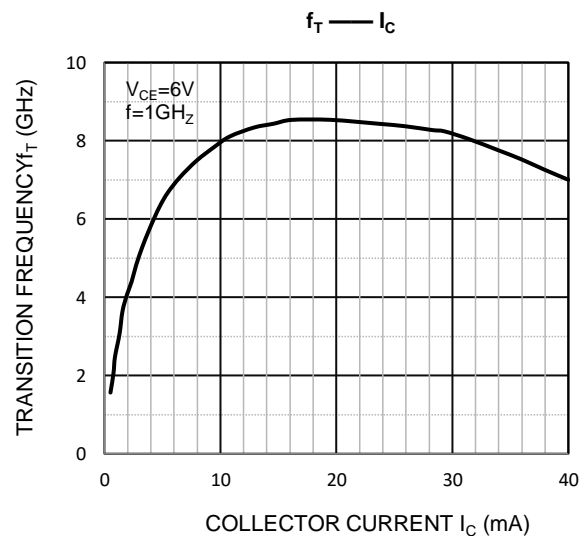
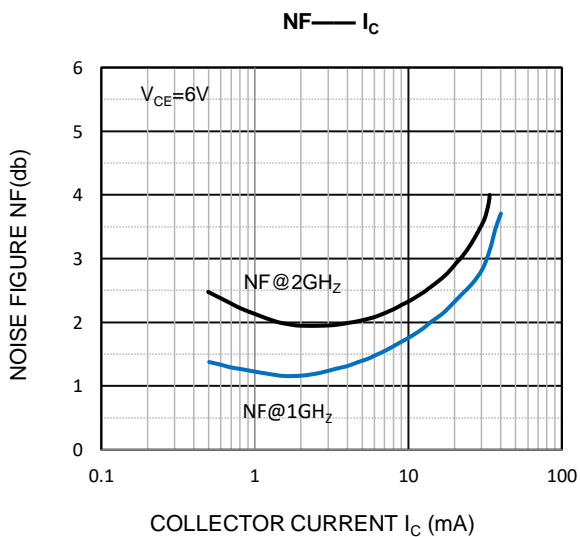
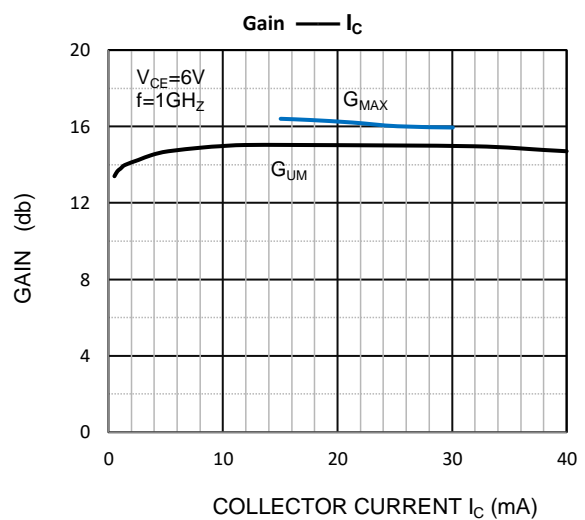
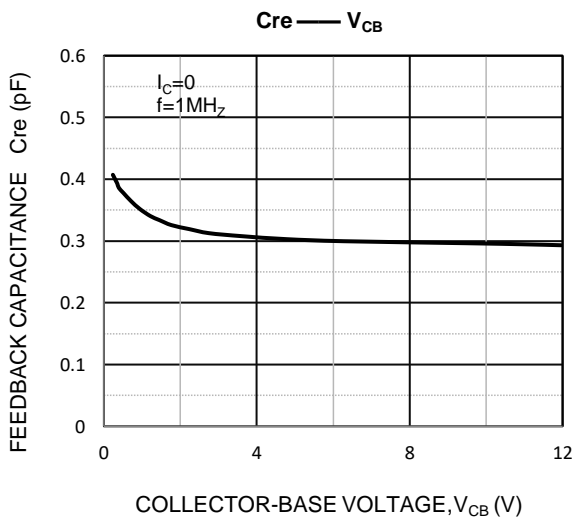
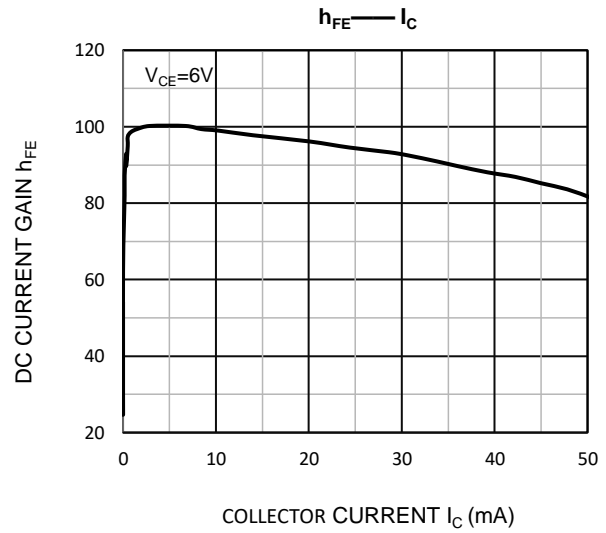
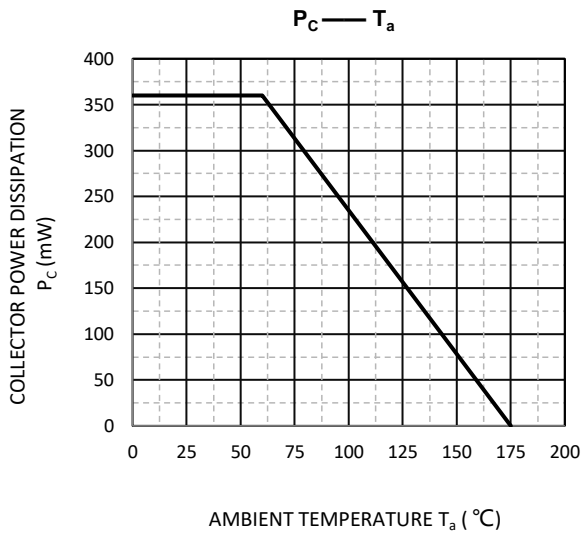
**Ordering Information (Example)**

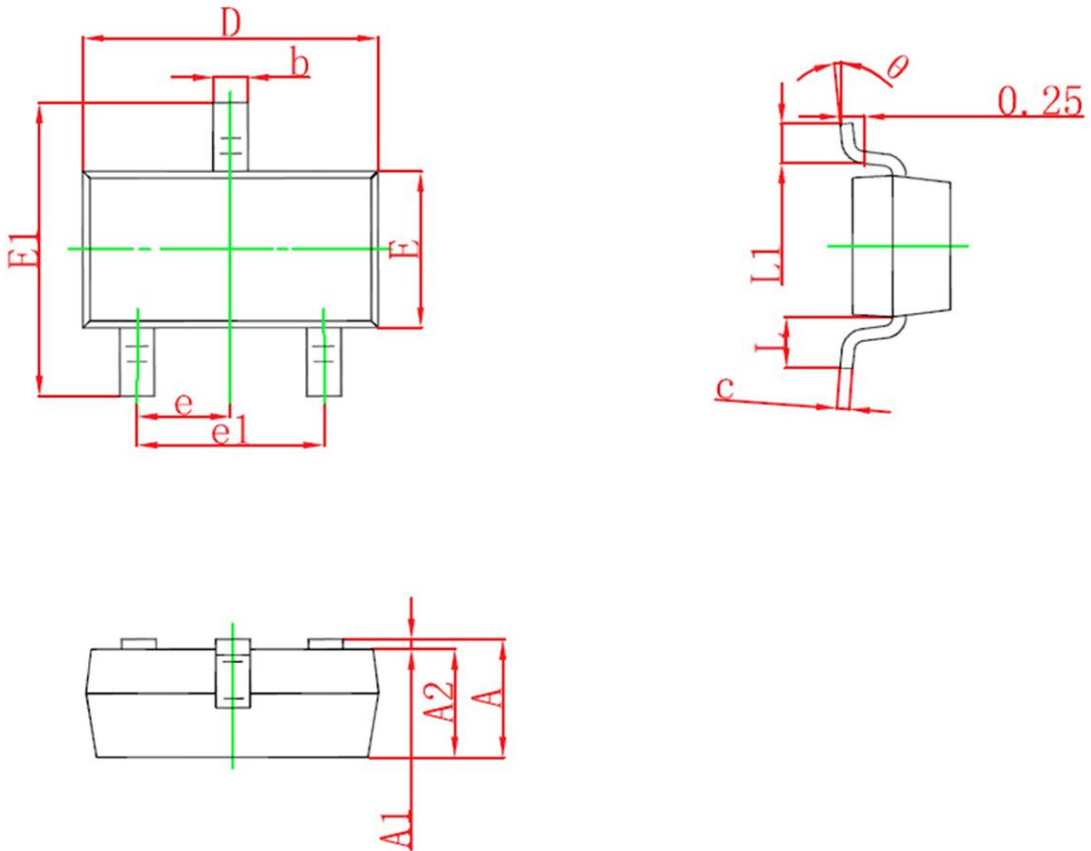
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
PBR941	SOT-23	V0	3,000	45,000	180,000	7"reel

**ELECTRICAL CHARACTERISTICS(Ta=25°C unless otherwise specified)**

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=100\mu A, I_E=0$	20	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=100\mu A, I_B=0$	10	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=10\mu A, I_C=0$	1.5	--	--	V
$I_{CBO}$	Collector cut-off current	$V_{CB}=10 V, I_E=0$	--	--	0.1	$\mu A$
$I_{EBO}$	Emitter cut-off current	$V_{EB}=1 V, I_C=0$	--	--	0.1	$\mu A$
$h_{FE}$	DC current gain	$V_{CE}=6V, I_C=5mA$	50	--	200	
		$V_{CE}=6V, I_C=15mA$	--	100	--	
$N_F$	Noise Figure	$V_{CB}=6V, I_C=5mA, f=1GHz$	--	1.4	--	dB
		$V_{CB}=6V, I_C=5mA, f=2GHz$	--	2	--	dB
$C_{re}$	Feedback capacitance	$V_{CB}=6V, I_C=0mA, f=1MHz$	--	0.3	--	pF
$f_T$	Transition frequency	$V_{CE}=6V, I_C=15mA, f=1GHz$	--	8	--	GHz

Typical Operating Characteristics



**SOT-23 Package information**


Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E1	2.250	2.550	0.088	0.100
E	1.200	1.400	0.047	0.055
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°