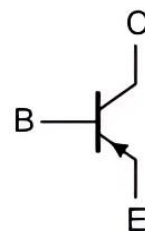


Features

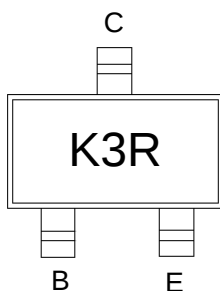
- Small Surface Mount Package
- Complementary to MMSTA42
- Ideal for Medium Power Amplification and Switching



SOT-323 top view



Schematic diagram



Marking and pin assignment



Halogen-Free

Maximum Ratings (Ta=25°C unless otherwise noted)

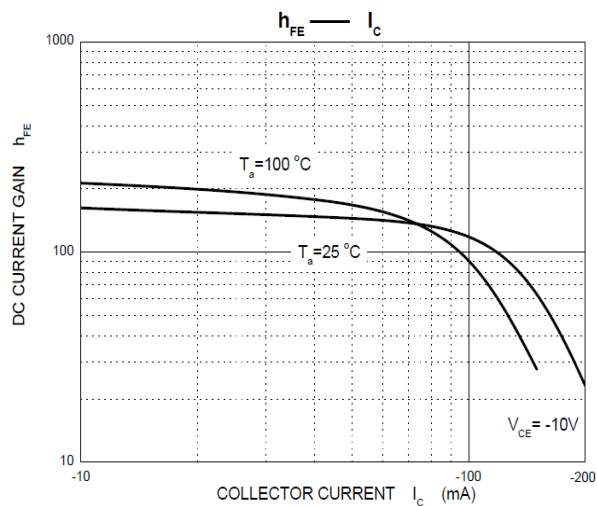
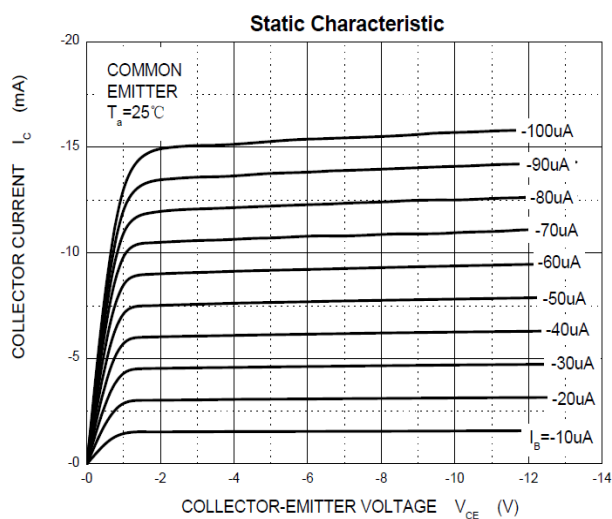
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-310	V
V_{CEO}	Collector-Emitter Voltage	-305	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-200	mA
I_{CM}	Collector Current -Pulsed	-500	mA
P_C	Collector Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

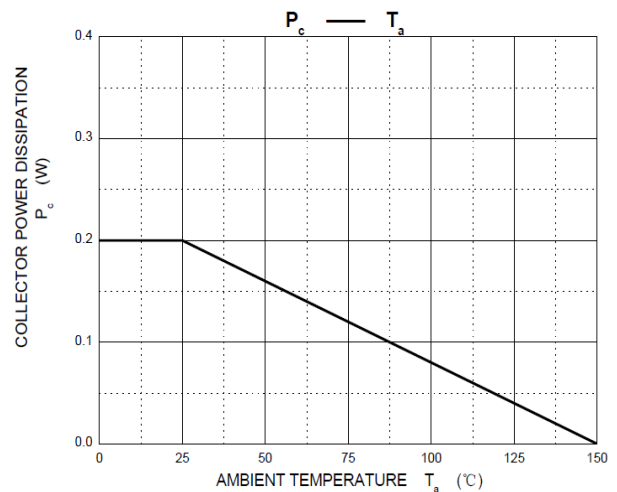
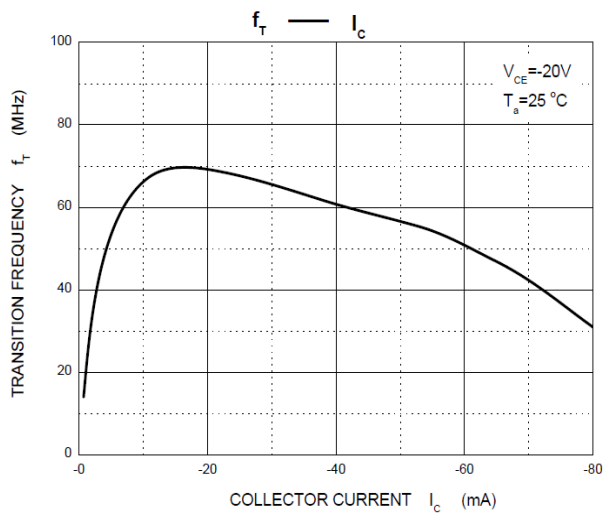
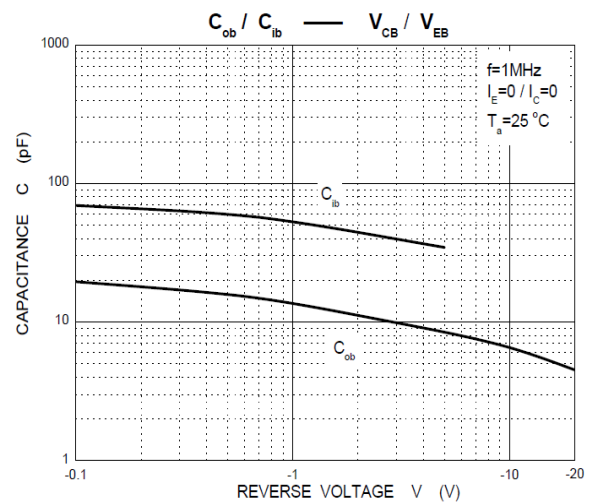
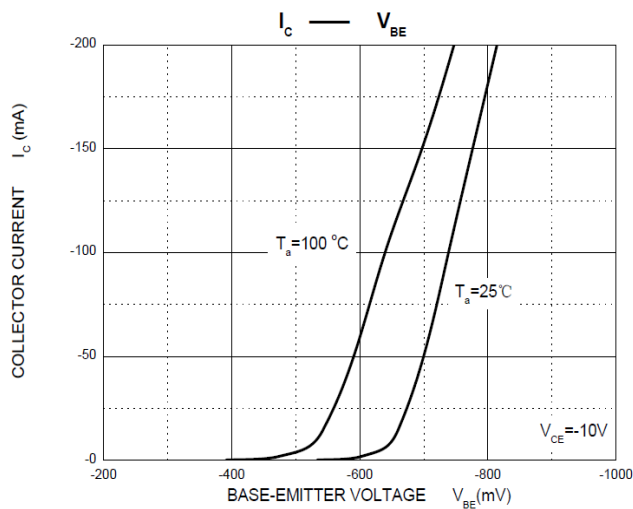
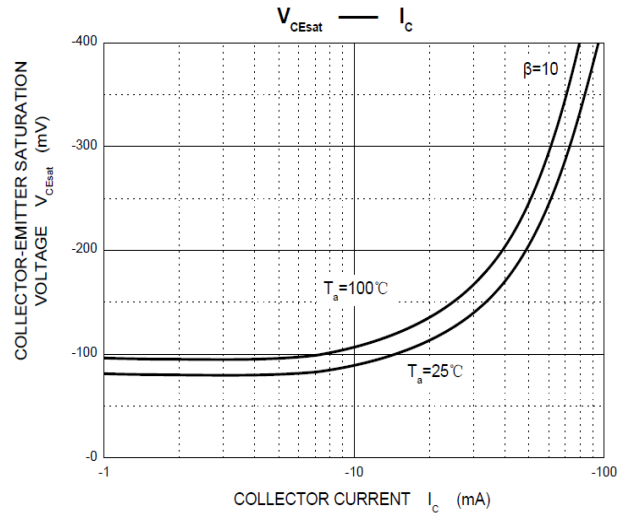
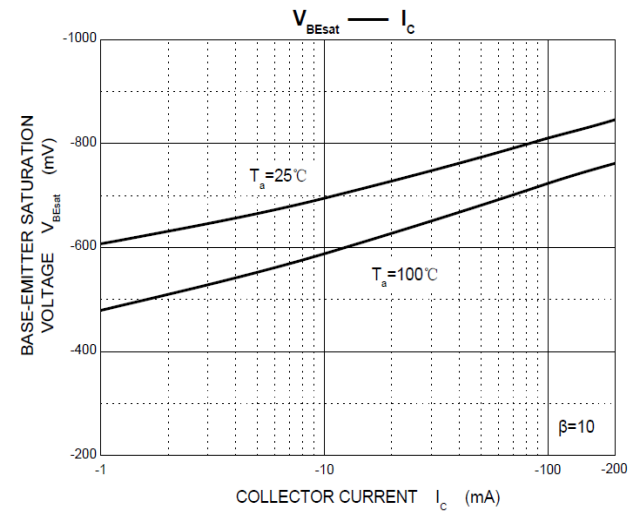
Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
MMSTA92	SOT-323	K3R	3,000	45,000	180,000	7"reel

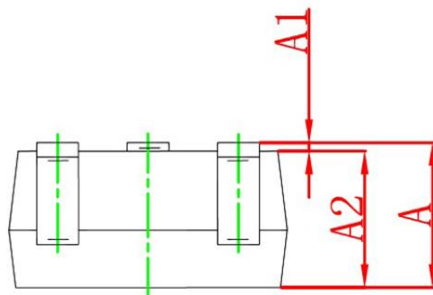
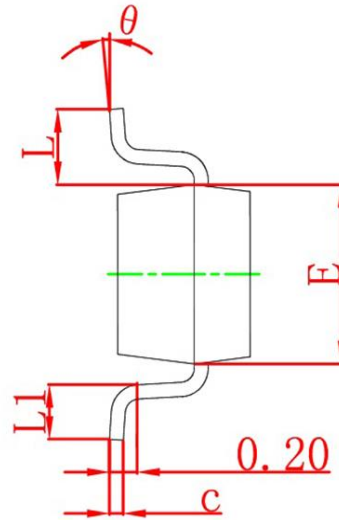
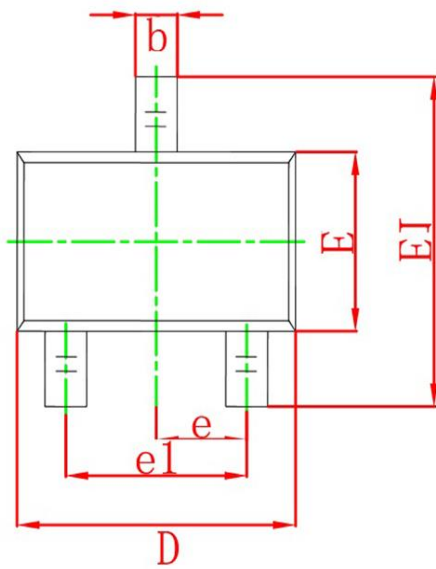
Electrical Characteristics (Ta=25°C unless otherwise specified)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -100\mu A, I_E = 0$	-310	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -1mA, I_B = 0$	-305	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -100\mu A, I_C = 0$	-5	--	--	V
I_{CBO}	Collector cut-off current	$V_{CB} = -200V, I_E = 0$	--	--	-250	nA
I_{EBO}	Emitter cut-off current	$V_{EB} = -5V, I_C = 0$	--	--	-100	nA
I_{CEO}	Collector cut-off current	$V_{CE} = -200V, I_B = 0$	--	--	-250	nA
		$V_{CE} = -300V, I_B = 0$	--	--	-5	μA
H_{FE}	DC current gain	$V_{CE} = -10V, I_C = -1mA$	60	--	--	--
		$V_{CE} = -10V, I_C = -10mA$	100	--	200	
		$V_{CE} = -10V, I_C = -30mA$	60	--	--	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = -20mA, I_B = -2mA$	--	--	-0.2	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C = -20mA, I_B = -2mA$	--	--	-0.9	V
C_{ob}	Transition frequency	$V_{CB} = -20V, I_E = 0, f = 1MHz$	--	--	6	pF
f_T	Transition frequency	$V_{CE} = -20V, I_E = -10mA, f = 30MHz$	50	--	--	MHz

Typical Characteristics




SOT-323 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650TYP		0.026TYP	
e1	1.200	1.400	0.047	0.055
L	0.525REF		0.021REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°