



Features

- General Purpose Switching Application

Package Marking and Ordering Information

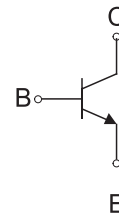
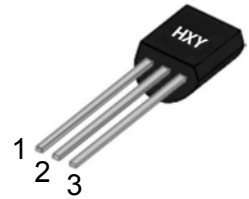
Product ID	Pack	Marking	Qty(PCS)
KSP8099TF	TO-92	2N5551	1000

1. EMITTER

2. BASE

3. COLLECTOR

TO-92



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

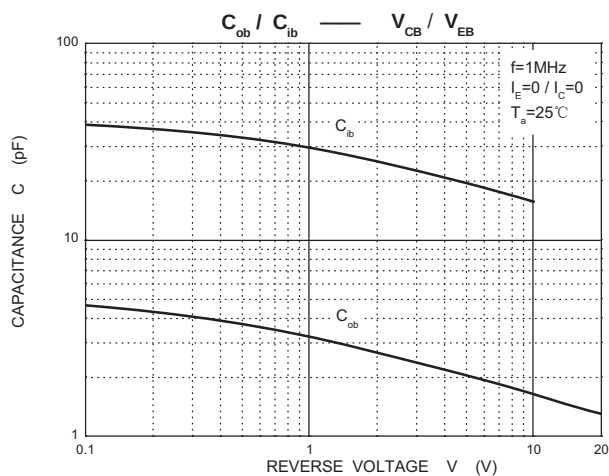
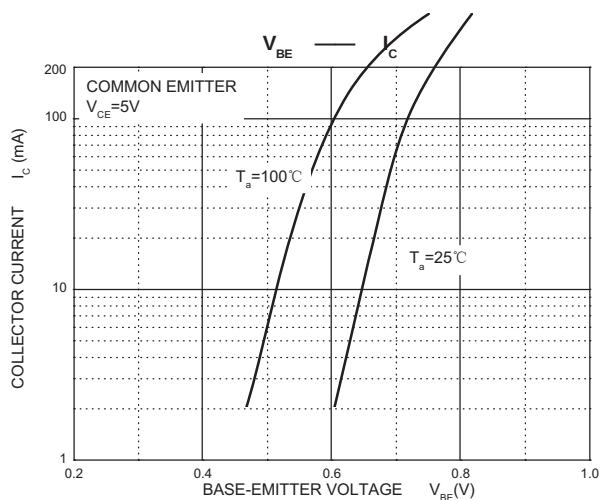
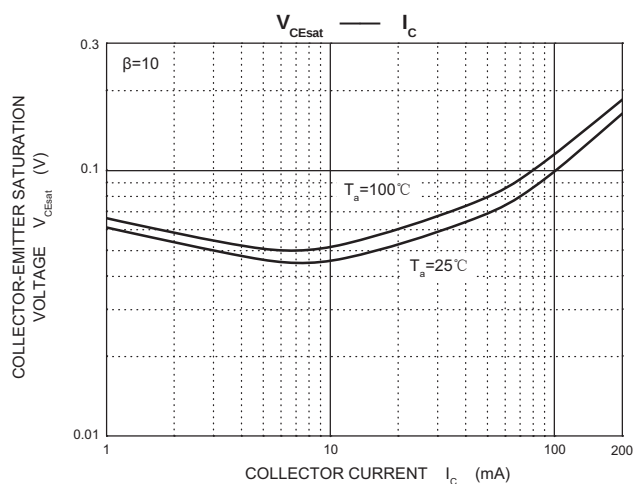
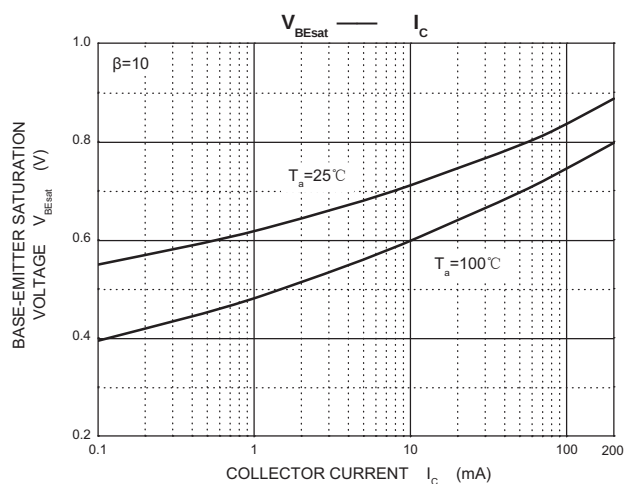
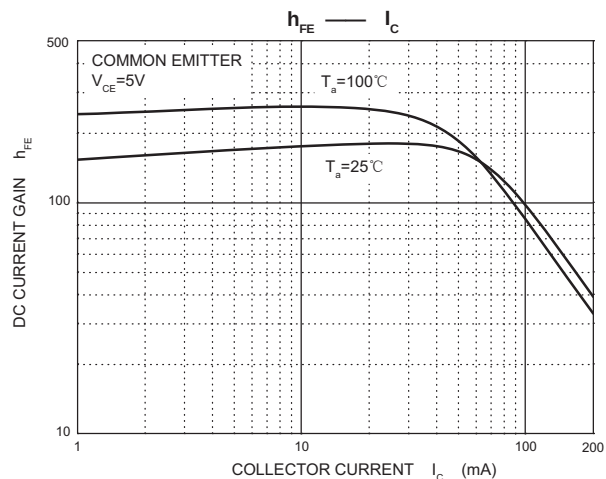
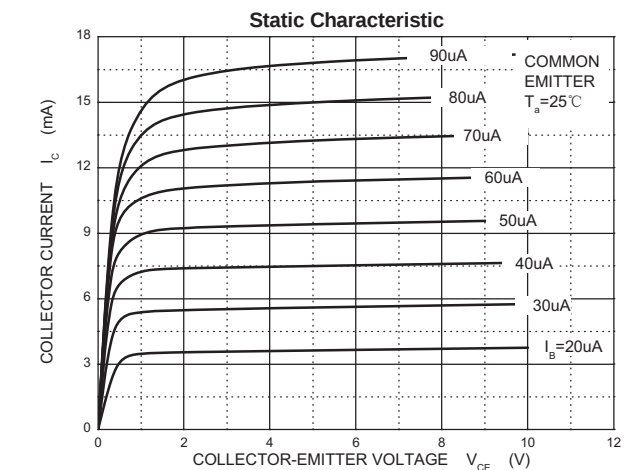
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	0.6	A
P_C	Collector Power Dissipation	625	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	200	°C /W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

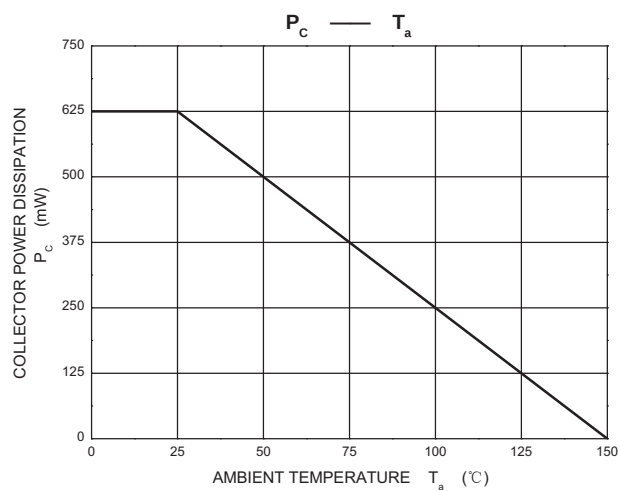
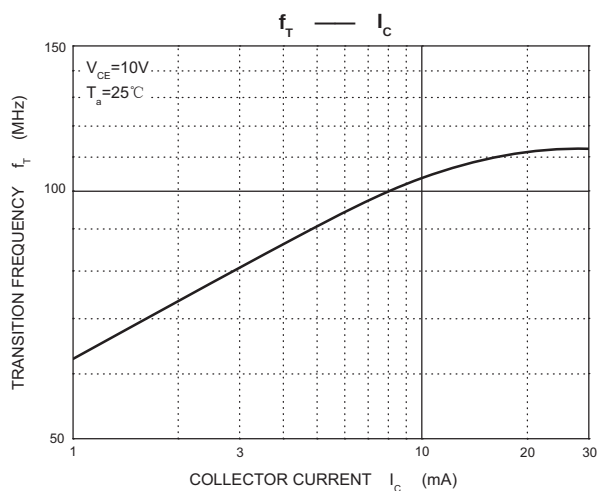
Electrical Characteristics (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	180			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}^*$	$I_C=1mA, I_B=0$	160			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=120V, I_E=0$			50	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V, I_C=0$			50	nA
DC current gain	$h_{FE(1)}$	$V_{CE}=5V, I_C=1mA$	80			
	$h_{FE(2)}$	$V_{CE}=5V, I_C=10mA$	100		200	
	$h_{FE(3)}$	$V_{CE}=5V, I_C=50mA$	50			
Collector-emitter saturation voltage	$V_{CE(sat)(1)}$	$I_C=10mA, I_B=1mA$			0.15	V
	$V_{CE(sat)(2)}$	$I_C=50mA, I_B=5mA$			0.2	V
Base-emitter saturation voltage	$V_{BE(sat)(1)}$	$I_C=10mA, I_B=1mA$			1	V
	$V_{BE(sat)(2)}$	$I_C=50mA, I_B=5mA$			1	V
Collector output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$			6	pF
Emitter input capacitance	C_{ib}	$V_{BE}=0.5V, I_C=0, f=1MHz$			20	pF
Transition frequency	f_T	$V_{CE}=10V, I_C=10mA, f=100MHz$	100		300	MHz

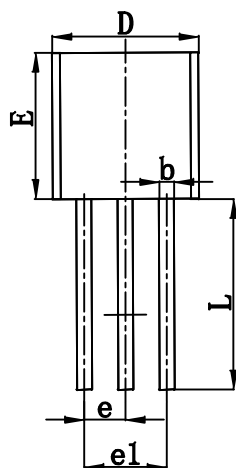
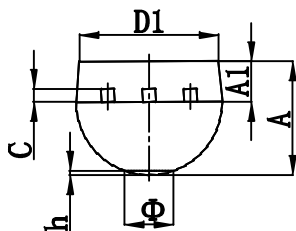


Typical Characteristics





TO-92 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.300	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015



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