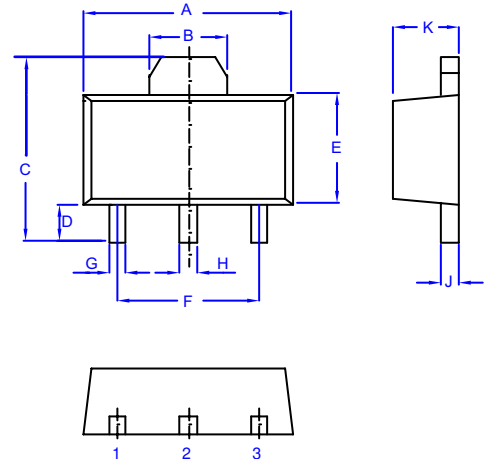




**2SD2150-R**  
**2SD2150-S**

**NPN**  
**Plastic-Encapsulate**  
**Transistors**

**SOT-89**



- 1. Base
- 2. Collector
- 3. Emitter

DIM	DIMENSINS				NOTES
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.173	.181	4.39	4.60	
B	.061	-----	1.55	-----	REF.
C	.154	.165	3.91	4.25	
D	.031	.039	0.80	1.00	
E	.092	.100	2.34	2.54	
F	.118	-----	3.00	-----	TYP
G	.013	.019	0.33	0.48	
H	.015	.021	0.38	0.53	
J	.015	.016	0.38	0.41	
K	.055	.063	1.40	1.60	

**Features**

- Halogen free available upon request by adding suffix "-HF"
- Excellent current-to-gain characteristics
- Low collector saturation voltage  $V_{CE(sat)}$
- Lead Free Finish/Rohs Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

**Maximum Ratings**

Symbol	Rating	Rating	Unit
$V_{CEO}$	Collector-Emitter Voltage	20	V
$V_{CBO}$	Collector-Base Voltage	40	V
$V_{EBO}$	Emitter-Base Voltage	6.0	V
$I_C$	Collector Current -Continuous	3.0	A
$P_C$	Collector dissipation	500	mW
$T_J$	Junction Temperature	-55 to +150	$^{\circ}C$
$T_{STG}$	Storage Temperature	-55 to +150	$^{\circ}C$

**Electrical Characteristics @25 $^{\circ}C$  Unless Otherwise Specified**

Symbol	Parameter	Min	Typ	Max	Units
--------	-----------	-----	-----	-----	-------

**OFF CHARACTERISTICS**

$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=50\mu A, I_E=0$ )	40	---	---	Vdc
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=1.0mA, I_B=0$ )	20	---	---	Vdc
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage ( $I_E=50\mu A, I_C=0$ )	6.0	---	---	Vdc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=30V, I_E=0$ )	---	---	0.1	$\mu A$
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB}=5.0V, I_C=0$ )	---	---	0.1	$\mu A$

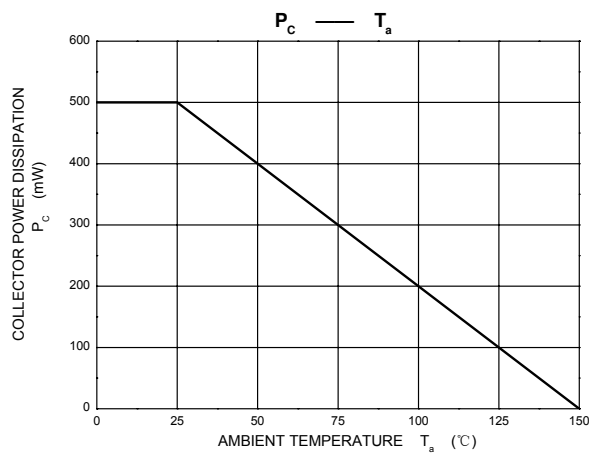
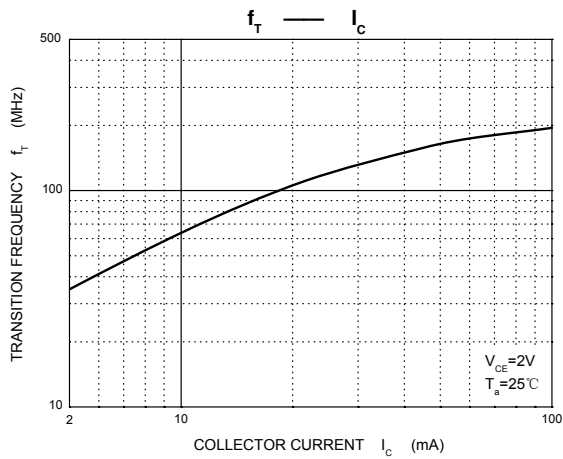
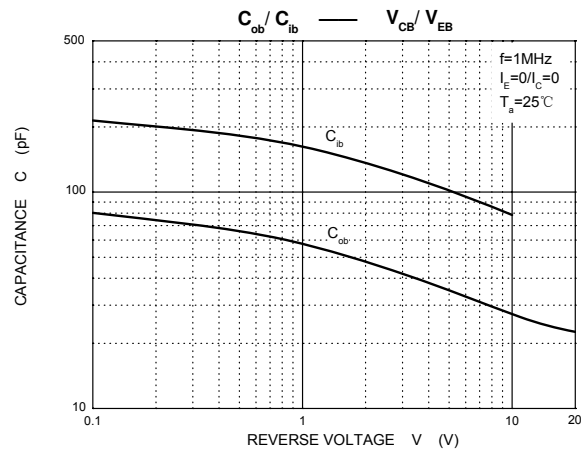
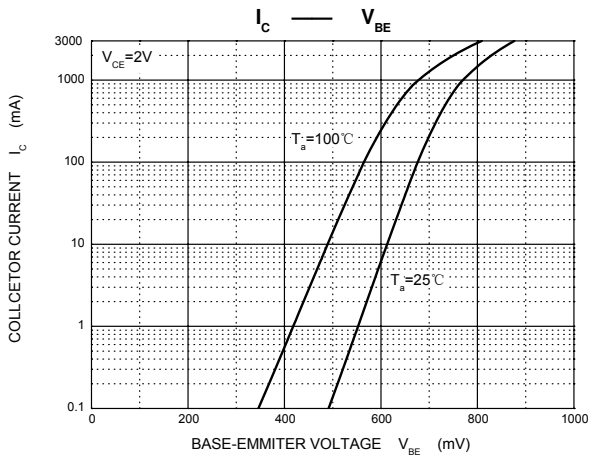
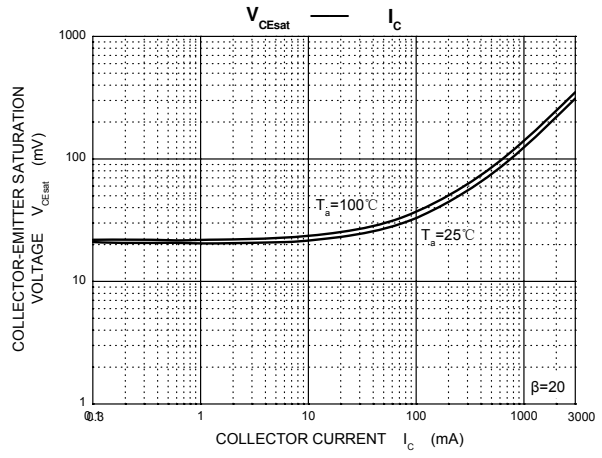
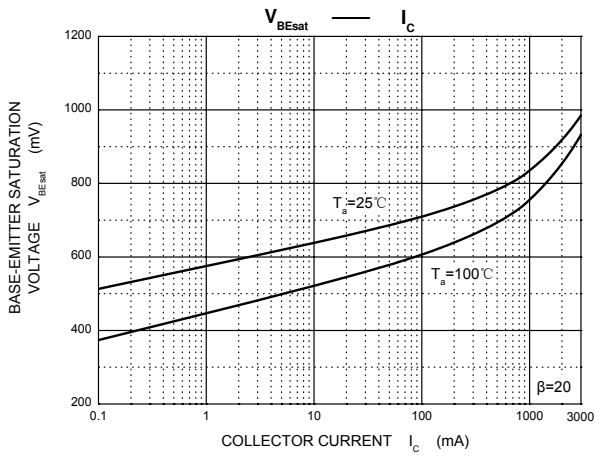
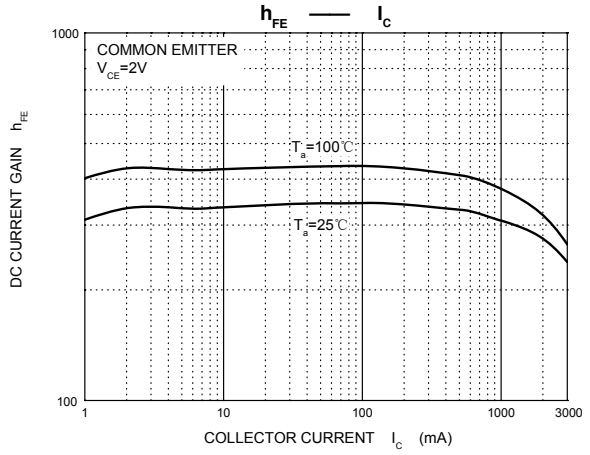
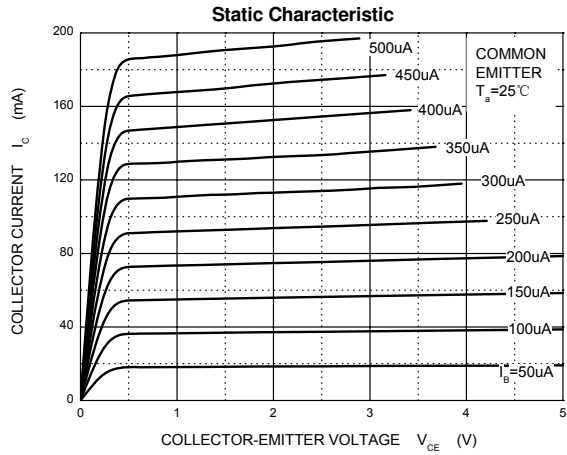
**ON CHARACTERISTICS**

$h_{FE}$	DC Current Gain ( $I_C=100mA, V_{CE}=2.0V$ )	180	---	560	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=2.0A, I_B=0.1A$ )			0.5	Vdc
$f_T$	Gain-Bandwidth product ( $V_{CE}=2V, I_C=500mA, f=100MHz$ )	---	290	---	MHz
$C_{ob}$	Out Capacitance ( $V_{CB}=10V, f=1.0MHz, I_E=0$ )	---	25	---	pF

**hFE CLASSIFICATION**

Rank	R	S
Range	180-390	270-560
Marking	CFR	CFS

**Typical Characteristics**





Micro Commercial Components

### Ordering Information :

Device	Packing
Part Number-TP	Tape & Reel; 1 Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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