

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

### FEATURE

- Low  $V_{CE(sat)}$ ,  $V_{CE(sat)}=0.15V(Typ.)(I_C/I_B=500mA/50mA)$
- Complements to 2SB1132

### MARKING

DAR

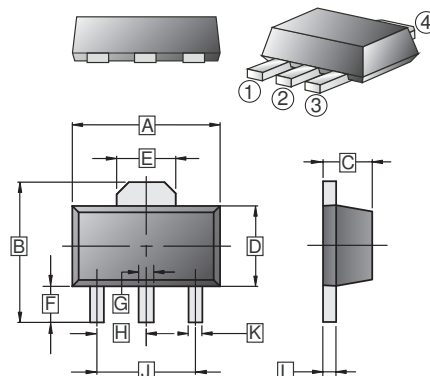
### PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-89	1K	7 inch

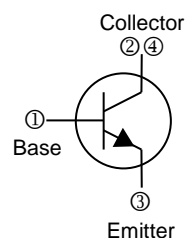
### ORDER INFORMATION

Part Number	Type
2SD1664-R	Lead (Pb)-free
2SD1664-R-C	Lead (Pb)-free and Halogen-free

### SOT-89



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.40	4.60	G	0.40	0.58
B	3.94	4.25	H	1.50 TYP.	
C	1.40	1.60	J	3.00 TYP.	
D	2.25	2.60	K	0.32	0.52
E	1.55 TYP.		L	0.35	0.44
F	0.89	1.20			



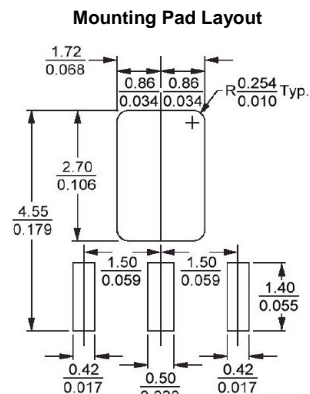
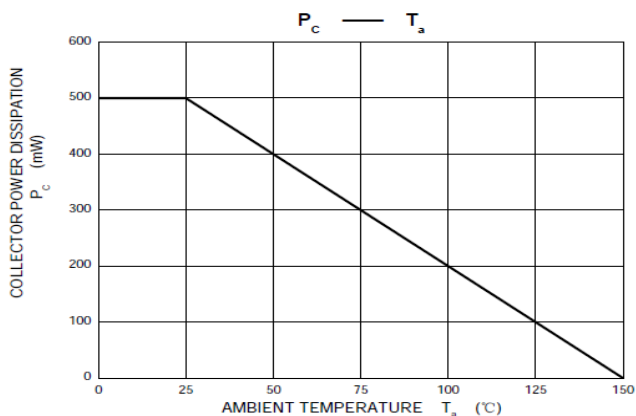
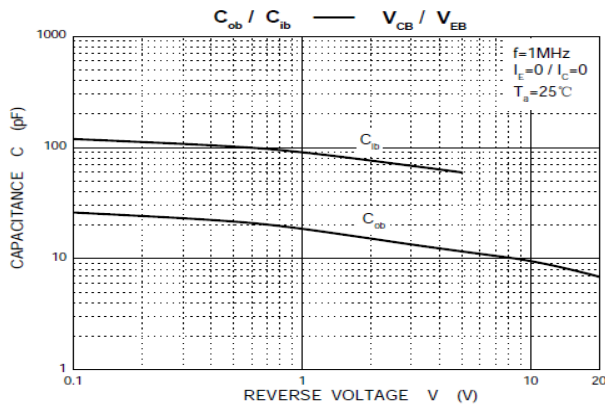
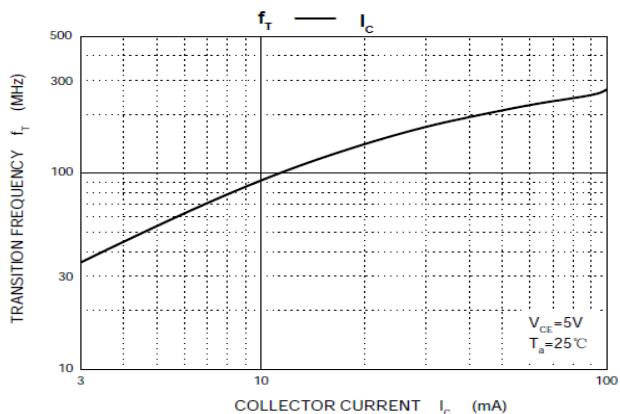
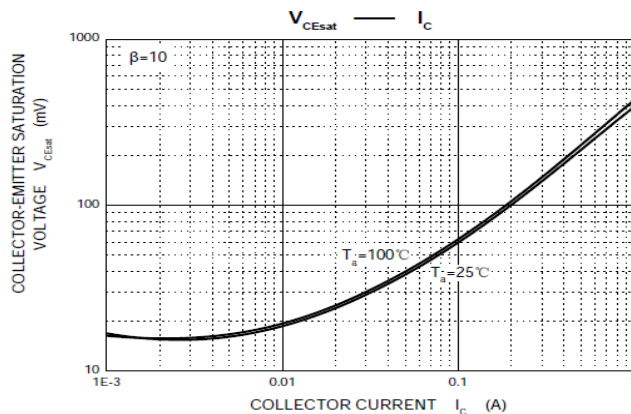
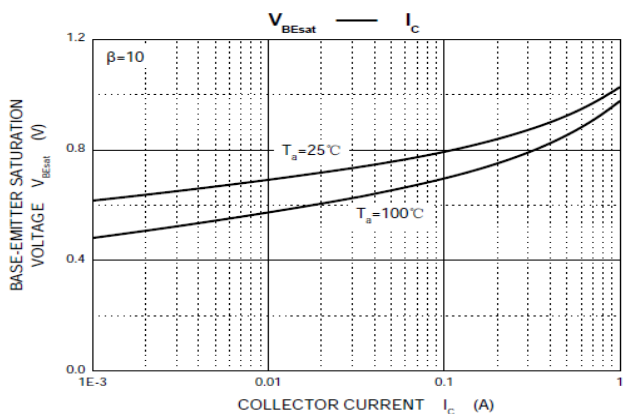
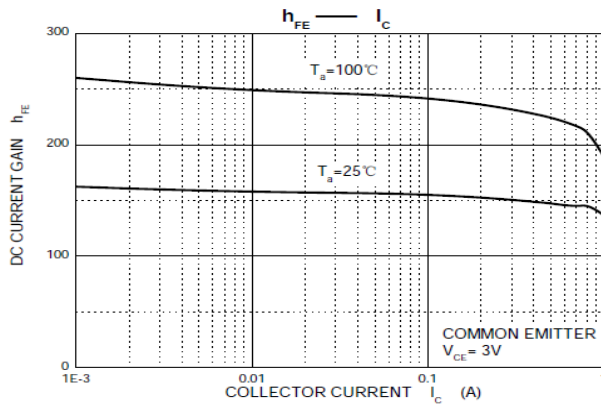
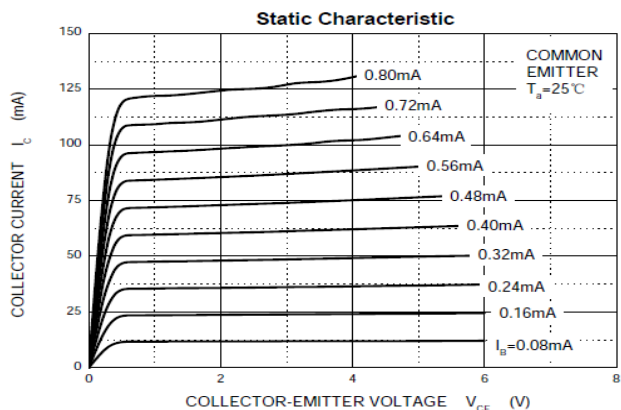
### ABSOLUTE MAXIMUM RATINGS ( $T_A=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector-Base Voltage	$V_{CBO}$	40	V
Collector-Emitter Voltage	$V_{CEO}$	32	
Emitter-Base Voltage	$V_{EBO}$	5	
Continuous Collector Current	$I_C$	1	A
Collector Power Dissipation	$P_C$	500	mW
Junction & Storage Temperature Range	$T_J, T_{STG}$	150, -55~150	$^{\circ}C$

### ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	40	-	-	V	$I_C=50\mu A, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	32	-	-		$I_C=1mA, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5	-	-		$I_E=50\mu A, I_C=0$
Collector Cut-off Current	$I_{CBO}$	-	-	0.5	$\mu A$	$V_{CB}=20V, I_E=0$
Emitter Cut-off Current	$I_{EBO}$	-	-	0.5		$V_{EB}=4V, I_C=0$
DC Current Gain	$h_{FE}$	180	-	390		$V_{CE}=3V, I_C=100mA$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.4	V	$I_C=0.5A, I_B=50mA$
Transition Frequency	$f_T$	-	150	-	MHz	$V_{CE}=5V, I_C=50mA, f=100MHz$
Output Capacitance	$C_{OB}$	-	15	-	pF	$V_{CB}=10V, I_E=0, f=1MHz$

**CHARACTERISTIC CURVES**



\*Dimensions in millimeters