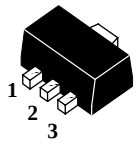
WEITRON

KTC4379

NPN EPITAXIAL PLANAR TRANSISTOR

Lead(Pb)-Free

1. BASE
2. COLLECTOR
3. EMITTER



SOT-89

ABSOLUTE MAXIMUM RATINGS(T_a =25°C Unless Otherwise Noted)

Rating	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current-Continuous	I_C	2.0	A
Collector Power Disspation	P_C	0.5	W
Junction Temperature	T_J	150	˚C
Storage Temperature	T_{stg}	-55 to 150	˚C

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage I_C=1mA,I_E=0	BV_{CBO}	50	-	-	V
Collector-Emitter Breakdown Voltage I_C=10mA,I_B=0	BV_{CEO}	50	-	-	V
Emitter-Base Breakdown Voltage I_C=0,I_E=1mA	BV_{EBO}	5	-	-	V
Collector Cut-Off Current I_E=0,V_{CB}=50V	I_{CBO}	-	-	0.1	μA
Emitter-Cut-Off Current I_C=0,V_{EB}=5V	I_{EBO}	-	-	0.1	μA

ON CHARACTERISTICS

DC Current Gain I_C=0.5A,V_{CE}=2V I_C=1.5A,V_{CE}=2V	 $h_{FE(1)}$ $h_{FE(2)}$	 70 40	 - -	 240 -	-
Collector-Emitter Saturation Voltage I_C=1A, I_B=50mA	$V_{CE(sat)}$	-	-	0.5	V
Base-Emitter Saturation Voltage I_C=1A, I_B=50mA	$V_{BE(sat)}$	-	-	1.2	V

DYNAMIC CHARACTERISTICS

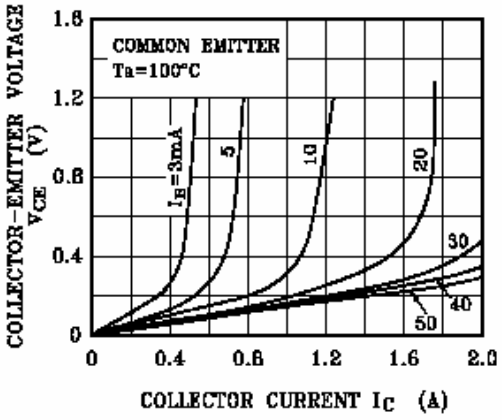
Transition Frequency I_C=50mA,V_{CE}=2V		f_T	-	120	-	MHz
Collector Output Capacitance I_E=0,V_{CB}=10V,f=1MHz		C_{ob}	-	30	-	pF
Switching Time V_{CC}=30V,I_C=1A,I_{B1}=-I_{B2}=-0.05A	Turn on Time	t_{on}	-	0.1	-	μs
Switching Time V_{CC}=30V,I_C=1A,I_{B1}=-I_{B2}=-0.05A	Storage Time	t_{stg}	-	1.0	-	μs
Switching Time V_{CC}=30V,I_C=1A,I_{B1}=-I_{B2}=-0.05A	Fall Time	t_f	-	0.1	-	μs

CLASSIFICATION OF $h_{FE(1)}$

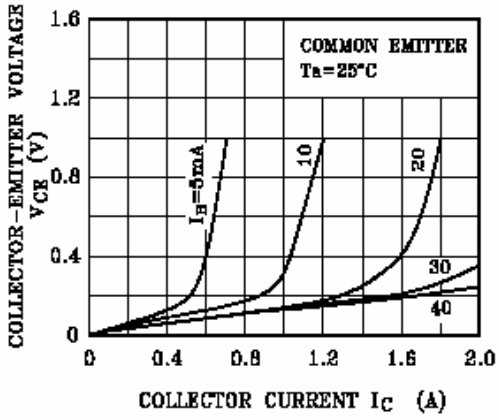
Rank	O	Y
Range	70-140	120-240
Marking	UO	UY

Typical Characteristics

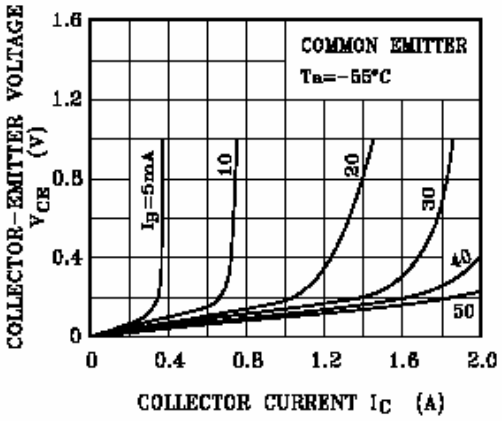
V_{CE} – I_C



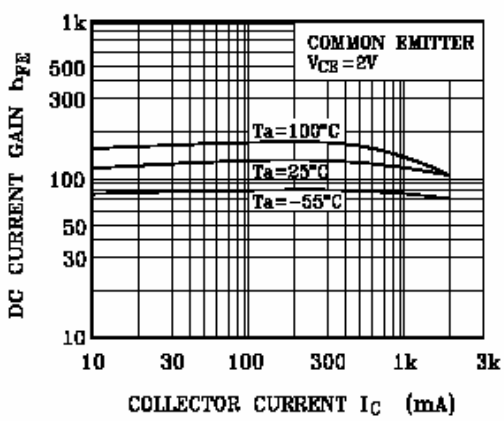
V_{CE} – I_C



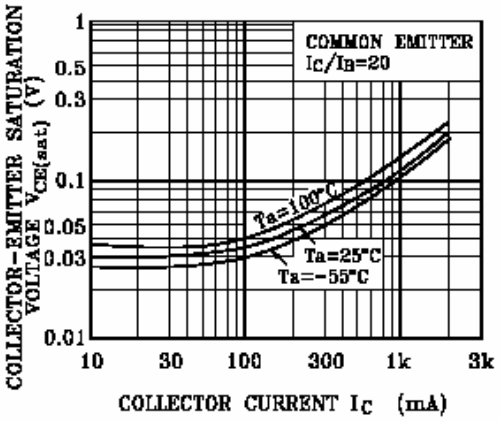
V_{CE} – I_C



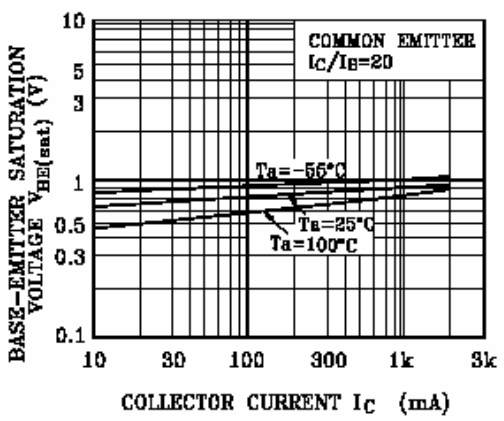
h_{FE} – I_C



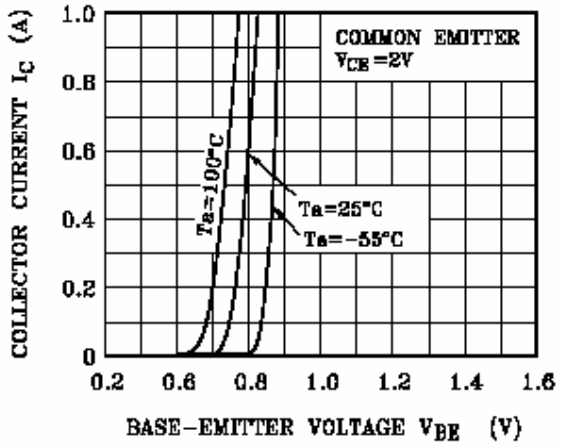
$V_{CE(sat)}$ – I_C



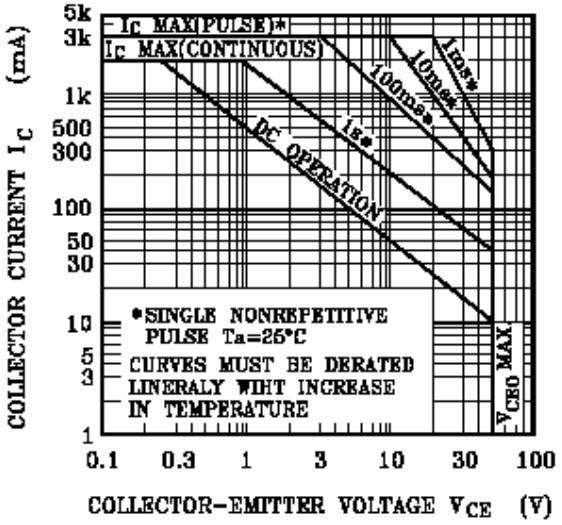
$V_{BE(sat)}$ – I_C



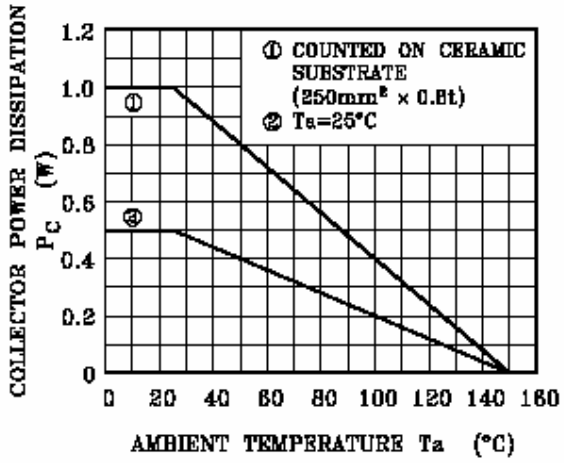
I_C – V_{BE}



SAFE OPERATING AREA

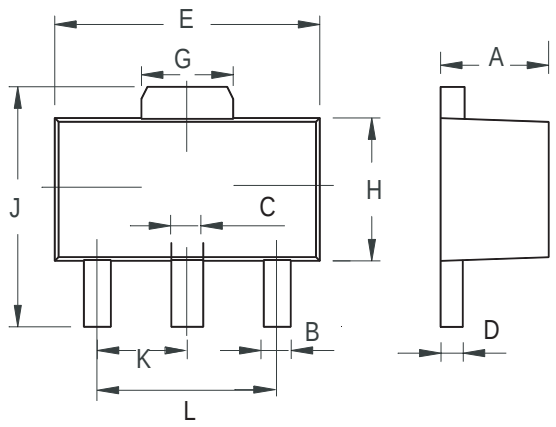


P_C – Ta



SOT-89 Outline Dimensions

unit:mm



SOT-89		
Dim	**Min**	**Max**
A	1.400	1.600
B	0.320	0.520
C	0.360	0.560
D	0.350	0.440
E	4.400	4.600
G	1.400	1.800
H	2.300	2.600
J	3.940	4.250
K	1.500TYP	
L	2.900	3.100