

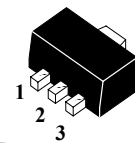
NPN Epitaxial Planar Transistors

(Pb) Lead(Pb)-Free

Features:

- * Low Collector Saturation Voltage
- * High Speed Switching
- * For Complementary Use With PNP Type WTM2907A

SOT-89



1. BASE
2. COLLECTOR
3. EMITTER

ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

Rating	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	75	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Collector Current	I_C	0.6	A
Collector Power Dissipation	P_D	0.5	W
Junction Temperature	T_j	+150	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$

Device Marking

WTM2222A = 2222A, 1P

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

Parameter	Symbol	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage $I_C=10\mu\text{A}$	BV_{CBO}	75	-	-	V
Collector-Emitter Breakdown Voltage $I_C=10\text{mA}$	BV_{CEO}	40	-	-	V
Emitter-Base Breakdown Voltage $I_E=10\mu\text{A}$	BV_{EBO}	6.0	-	-	V
Collector Cutoff Current $V_{CB}=60\text{V}$	I_{CBO}	-	-	10	nA
Collector Cutoff Current $V_{EB}=5.0\text{V}$	I_{EBO}	-	-	10	nA

ELECTRICAL CHARACTERISTICS (T_A=25°C Unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
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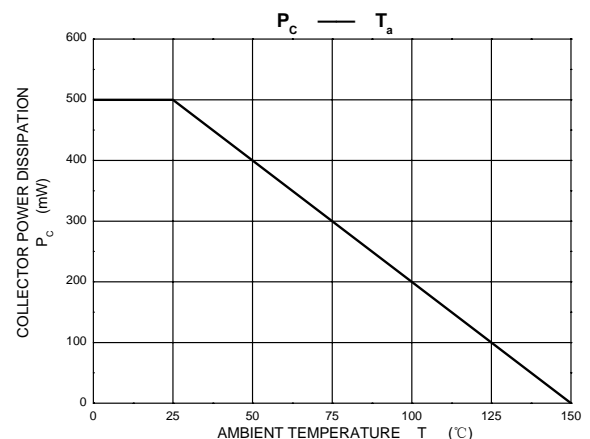
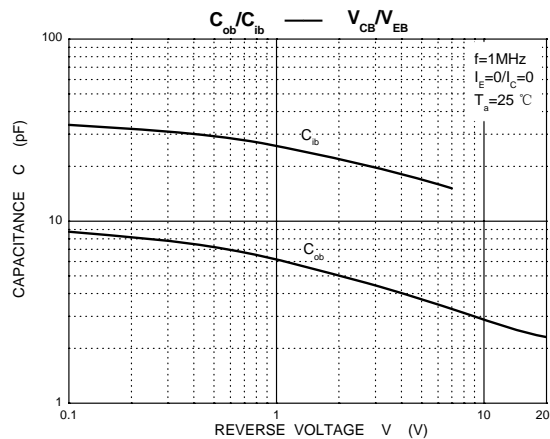
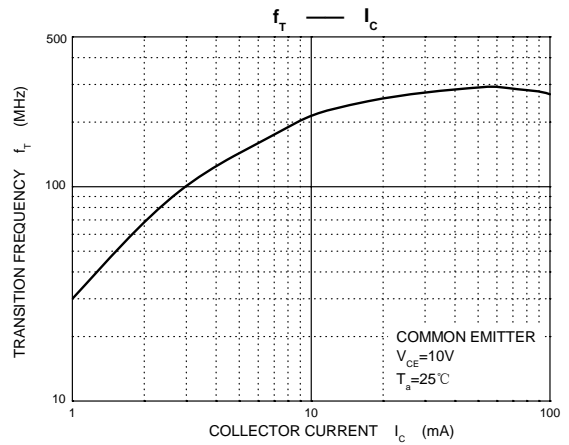
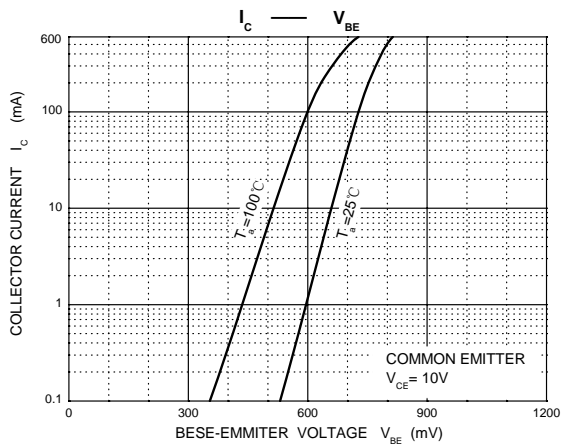
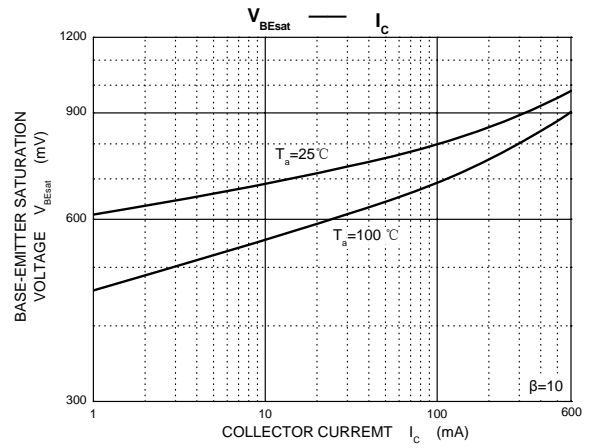
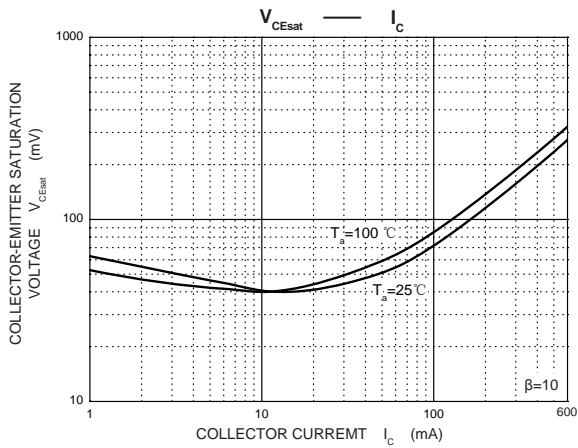
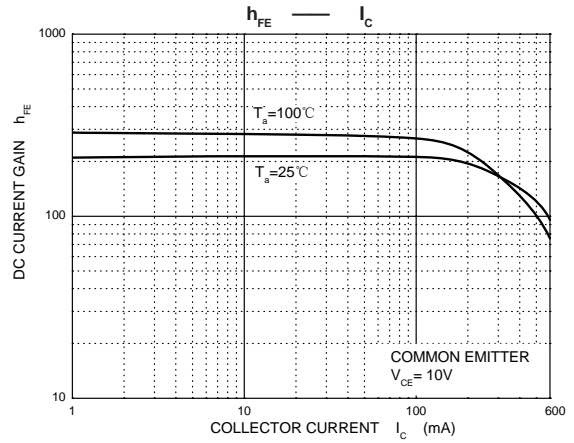
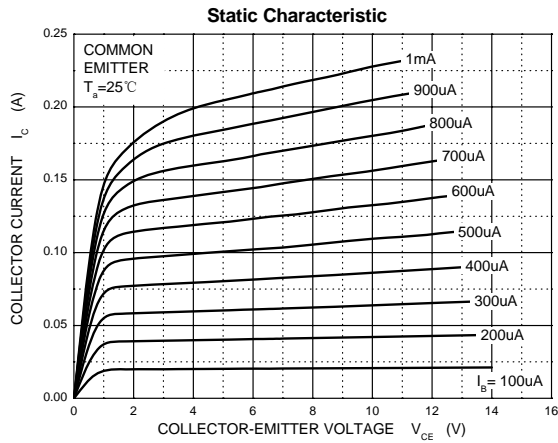
ON CHARACTERISTICS⁽¹⁾

DC Current Gain V _{CE} =10V, I _C =100μA	h _{FE1}	35	-	-	
V _{CE} =10V, I _C =1.0mA	h _{FE2}	50	-	-	
V _{CE} =10V, I _C =10mA	h _{FE3}	75	-	-	
V _{CE} =10V, I _C =150mA	h _{FE4}	100	-	300	-
V _{CE} =10V, I _C =500mA	h _{FE5}	40	-	-	
V _{CE} =1.0V, I _C =150mA	h _{FE6}	50	-	-	
Collector-Emitter Saturation Voltage I _C =150mA, I _B =15mA	V _{CE(sat)1}	-	-	300	mV
I _C =500mA, I _B =50mA	V _{CE(sat)2}	-	-	1.0	V
Base-Emitter Saturation Voltage I _C =150mA, I _B =15mA	V _{BE(sat)1}	0.6	-	1.2	V
I _C =500mA, I _B =50mA	V _{BE(sat)2}	-	-	2.0	V

DYNAMIC CHARACTERISTICS

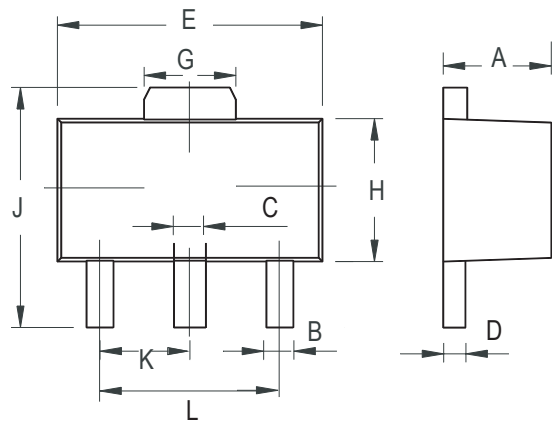
Transition Frequency V _{CE} =10V, I _C =20mA, f=100MHz	f _T	300	-	-	MHz
Output Capacitance V _{CB} =10V, I _E =0, f=1MHz	C _{ob}	-	-	8	pF
Delay Time V _{CC} =30V, I _C =150mA, V _{BE(off)} =0.5V, I _{B1} =15mA	t _d	-	-	10	ns
Rise Time V _{CC} =30V, I _C =150mA, V _{BE(off)} =0.5V, I _{B1} =15mA	t _r	-	-	25	ns
Storage Time V _{CC} =30V, I _C =150mA, I _{B1} = -I _{B2} =15mA	t _s	-	-	225	ns
Fall Time V _{CC} =30V, I _C =150mA, I _{B1} = -I _{B2} =15mA	t _f	-	-	60	ns

ELECTRICAL CHARACTERISTIC CURVES



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	1.500 TYP	
L	2.900	3.100