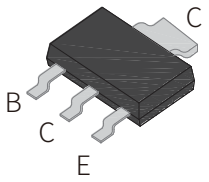
FEATURES

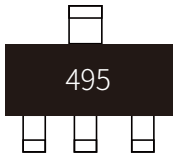
- Low equivalent on-resistance
- Power Dissipation of 1W
- High Stability and High Reliability



SOT-89

MECHANICAL DATA

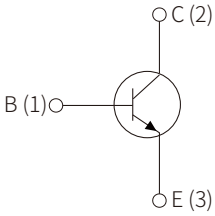
- SOT-89 small outline plastic package
- Epoxy UL: 94V-0
- Mounting position: Any



Marking

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003



Schematic Symbol

MAXIMUM RATINGS (T_A=25°C)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	170	V
Collector-Emitter Voltage	V_{CEO}	150	
Emitter-Base Voltage	V_{EBO}	5	
Collector Current-Continuous	I_C	1.0	A
Collector Power Dissipation	P_C	1	W
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	125	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55~+150	°C

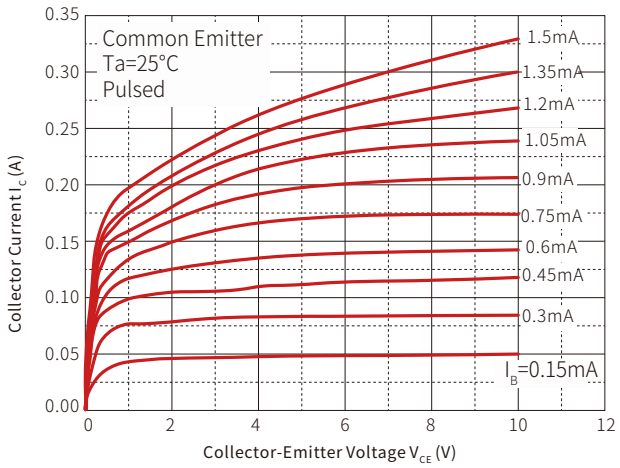
ELECTRICAL CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100uA,I_E=0	170			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$*	I_C=10mA,I_B=0	150			
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100uA,I_C=0	5			
Collector cut-off current	I_{CBO}	V_{CB}= 150V, I_E=0			100	nA
Collector cut-off current	I_{CES}	V_{CES}= 150V, I_E=0			100	
Emitter cut-off current	I_{EBO}	V_{EB}=4V, I_C=0			100	
DC current gain	$h_{FE(1)}$	V_{CE}=10V, I_C=1mA	100			
	$h_{FE(2)}$*	V_{CE}=10V, I_C=250mA	100		300	
	$h_{FE(3)}$*	V_{CE}=10V, I_C=500mA	50			
	$h_{FE(4)}$*	V_{CE}=10V, I_C=1000mA	10			
Collector-emitter saturation voltage	$V_{CE(sat)}$*	I_C=250mA, I_B=25mA			0.20	V
		I_C=500mA, I_B=50mA			0.30	
Base-emitter saturation voltage	$V_{BE(sat)}$*	I_C=500mA, I_B=50mA			1.00	
Base -emitter voltage	V_{BE}*	V_{CE}=10V, I_C=500mA			1.00	
Transition frequency	f_T	V_{CE}=10V,I_C=50mA, f=100MHz	100			MHz
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz			10	pF

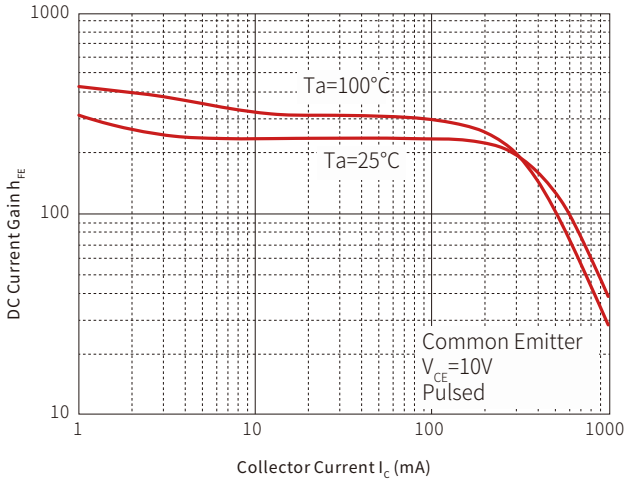
* Measured under pulsed conditions, Pulse width=300us, Duty cycle⩽2%

TYPICAL CHARACTERISTICS

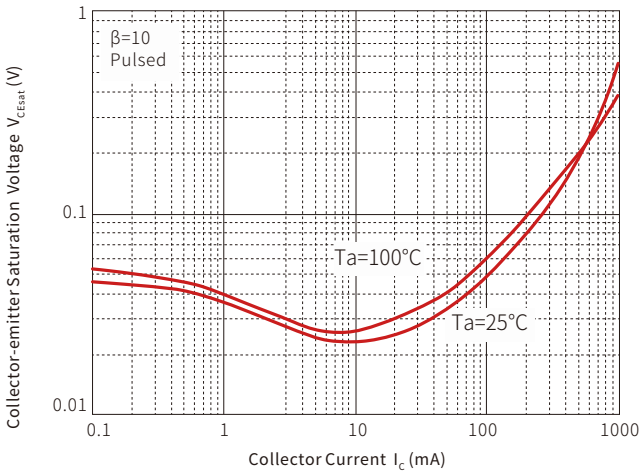
Static Characteristic



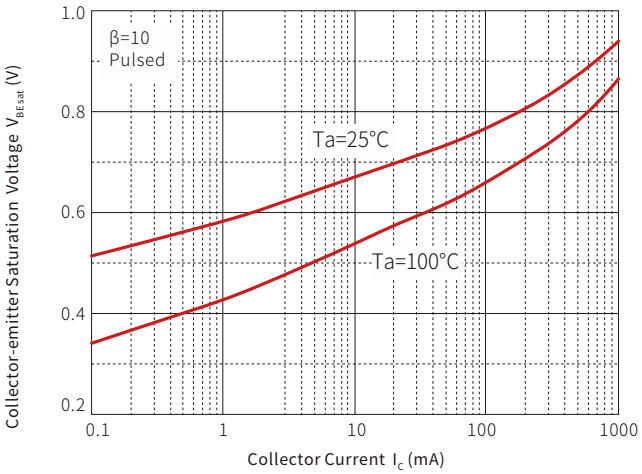
h_{FE} ——— I_C



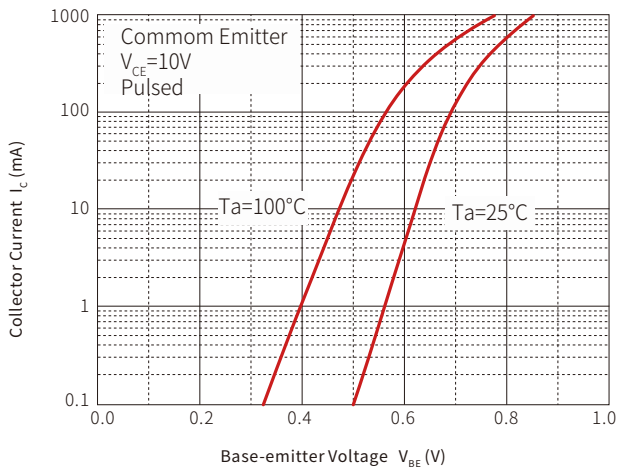
$V_{CE\,sat}$ ——— I_C



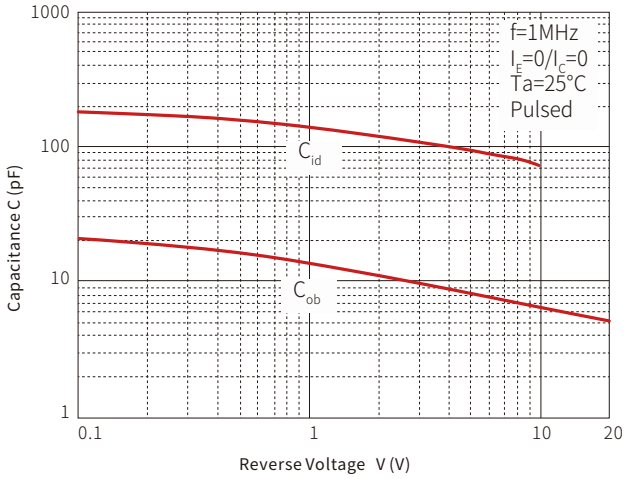
$V_{BE\,sat}$ ——— I_C



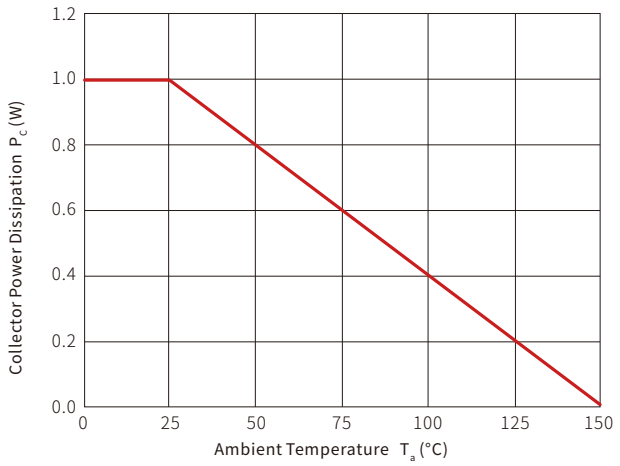
I_C ——— V_{BE}



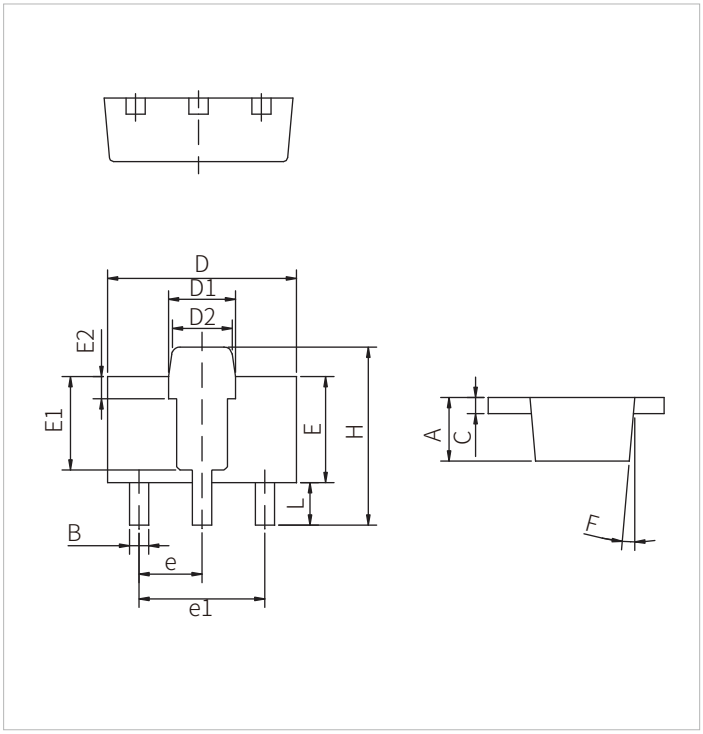
C_{ob}/C_{ib} ——— V_{CB}/V_{EB}



P_C ——— T_a



SOT-89 PACKAGE DIMENSIONS



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.40		1.60	0.055		0.063
B	0.40		0.52	0.016		0.020
C	0.35		0.41	0.014		0.016
D	4.40		4.60	0.173		0.181
D1	1.50		1.70	0.059		0.067
D2	1.30		1.50	0.051		0.059
E	2.40		2.60	0.094		0.102
E1		2.20			0.087	
E2		0.52			0.020	
e		1.50			0.059	
e1		3.00			0.118	
F		5.00			5.000	
H	4.05		4.25	0.159		0.167
L	0.89		1.20	0.035		0.047

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size	Box	Carton
FMMT495	SOT-89	1000PCS	7”	6000PCS	30000PCS

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No.3387 Shendu Road
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Email: fae01@semiware.com

Complaint & Suggestions
Tel: 86-21-3463-7172
Ext: 8868
Email: cs03@semiware.com

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