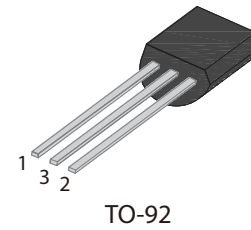


FEATURES

- | Audio Amplifier

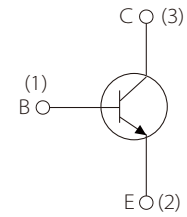
- | Flash Unit of Camera

- | Switching Circuit



APPROVALS

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



Schematic Symbol

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

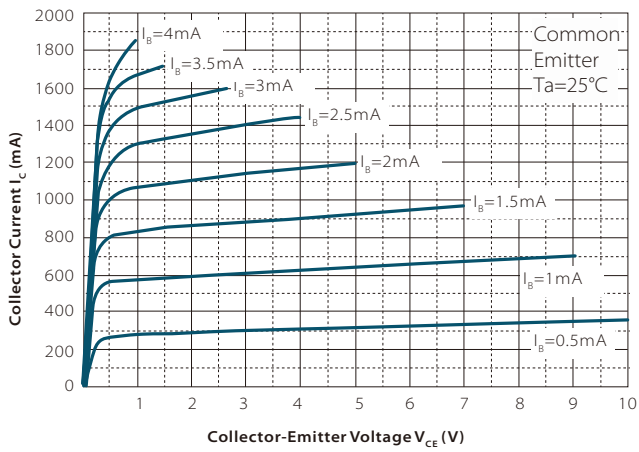
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	20	
Emitter-Base Voltage	V_{EBO}	7	
Collector Current	I_C	5	A
Collector Power Dissipation	P_C	0.75	W
Operating junction temperature range	T_J	150	$^{\circ}\text{C}$
Storage junction temperature range	T_{STG}	-65~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS (T_A=25°C)

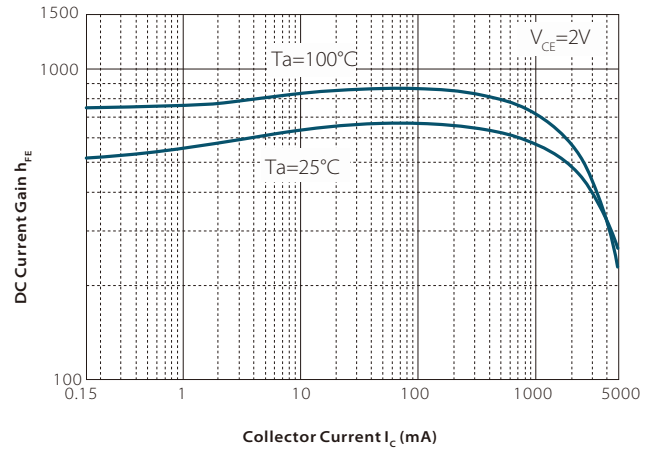
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	40			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	20			
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =100μA, I _C =0	7			
Collector cut-off current	I _{CBO}	V _{CB} =30V, I _E =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =6V, I _C =0			0.1	
DC current gain	h _{FE(1)}	V _{CE} =2V, I _C =0.15mA	150			
	h _{FE(2)}	V _{CE} =2V, I _C =500mA	200		900	
	h _{FE(3)}	V _{CE} =2V, I _C =2A	150			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =3A, I _B =100mA			0.5	V
Transition frequency	f _T	V _{CE} =5V, I _C =10mA, f=100MHz	100			MHz

TYPICAL CHARACTERISTICS

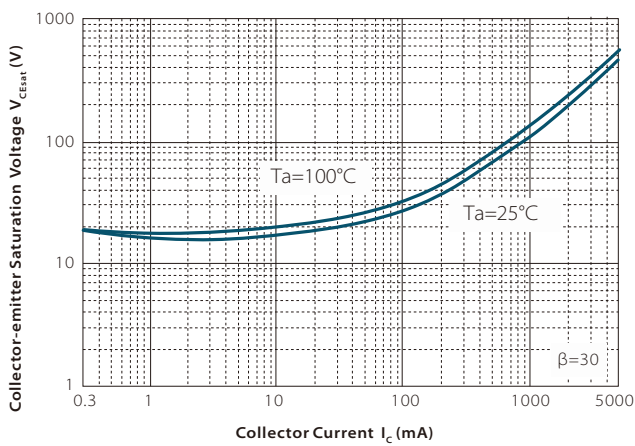
Static Characteristic



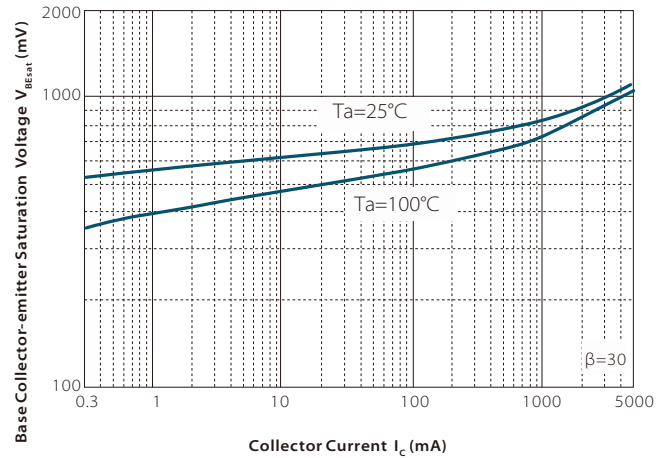
$h_{FE} \text{ — } I_C$

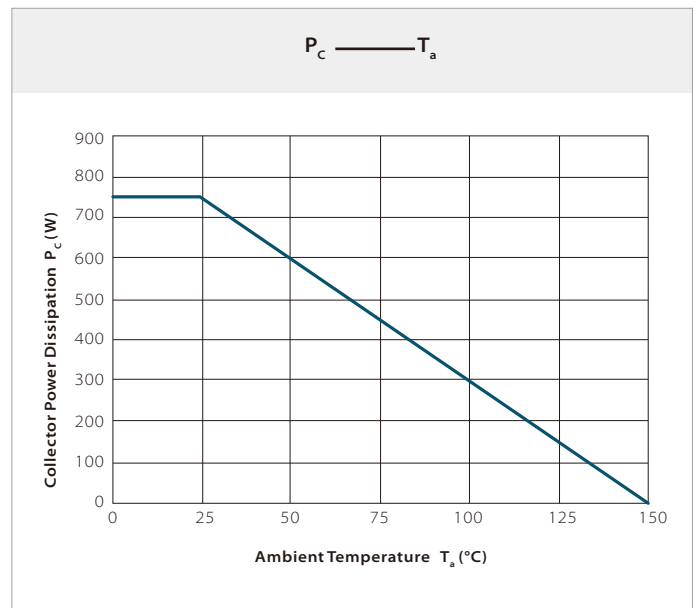
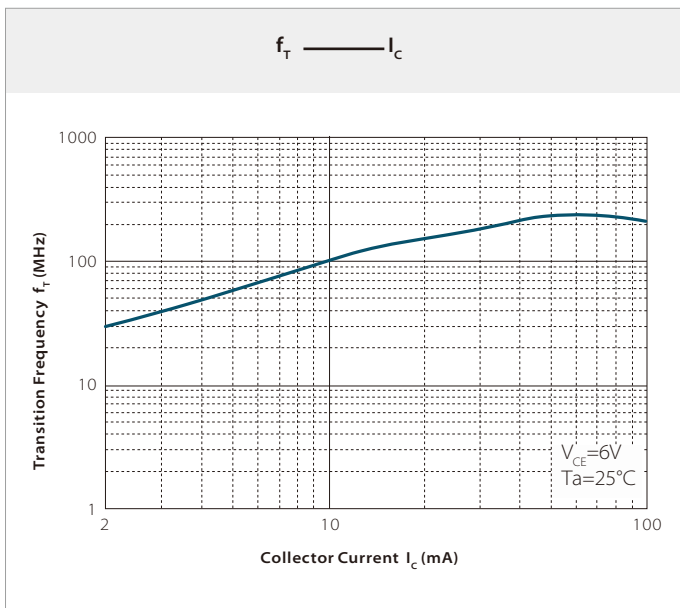
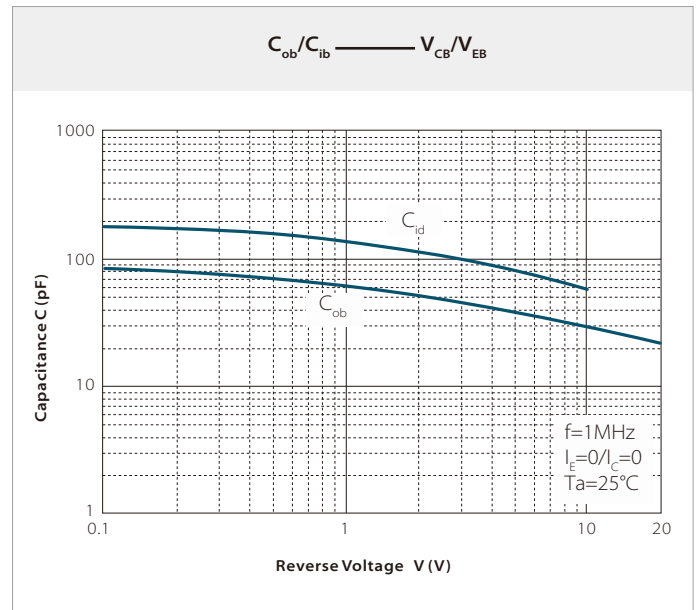
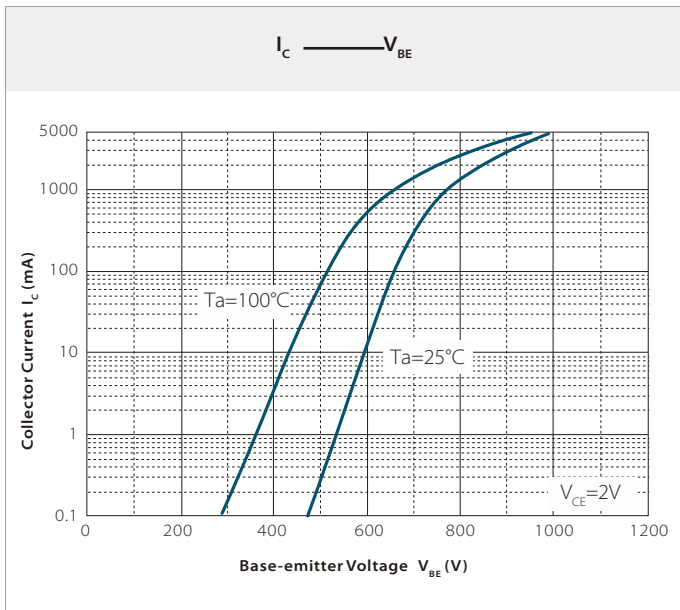


$V_{CE\text{ sat}} \text{ — } I_C$

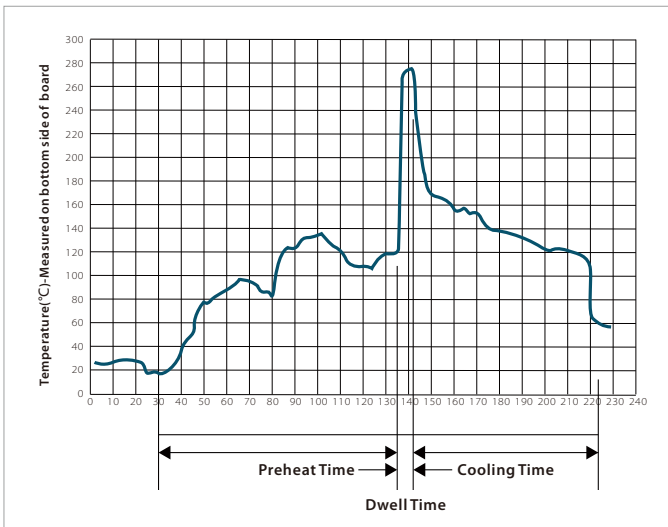


$V_{BE\text{ sat}} \text{ — } I_C$



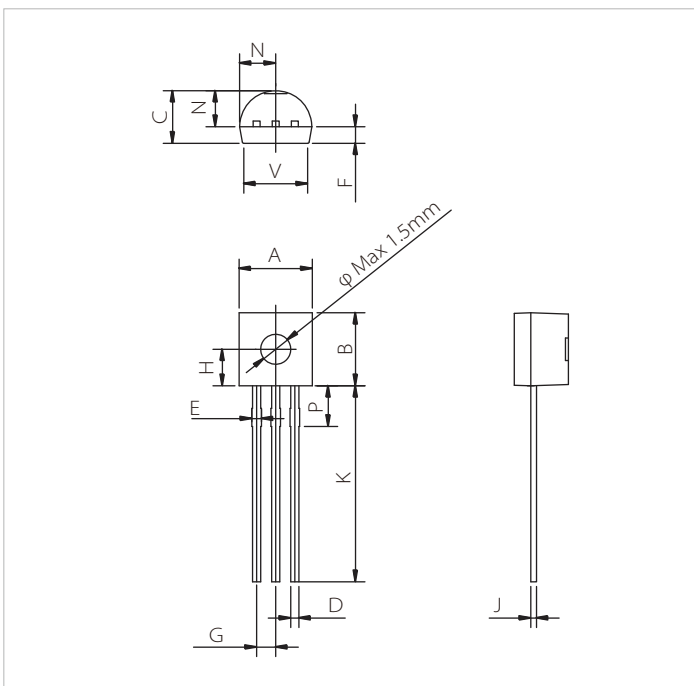


WAVE SOLDERING



Wave Parameter		Lead-free assembly
Pre Heat	Temperature Min	100°C
	Temperature Max	150°C
	Time(min to max)	60 – 180 secs
Solder pot Temperature		280°C Max
Solder Dwell Time		2-5 seconds

TO-92 PACKAGE DIMENSIONS



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.45		5.20	0.175		0.205
B	4.32		5.33	0.170		0.210
C	3.18		4.19	0.125		0.165
D	0.40		0.54	0.016		0.021
E	0.60		0.80	0.024		0.031
F		1.10			0.043	
G		1.27			0.050	
H		2.30			0.091	
J	0.36		0.50	0.014		0.020
K	12.7		15.0	0.500		0.591
N	2.04		2.66	0.080		0.105
P	1.86		2.06	0.073		0.081
V			4.30			0.169

ORDERING INFORMATION

Part Number	Marking	Package	Qty/pcs		
			Plastic Bag	Inner Box	Carton
D965	D965	TO-92	1000	10000	50000
			1000	10000	100000

To find your local partner within Semiwell's website : www.semiwell.com.cn

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