

EVVOSEMI[®]

THINK CHANGE DO



ESD



TVS



MOS



LDO



Diode



Sensor



DC-DC

Product Specification

▶ Domestic	Part Number	EVBCV27-S1, EVBCV47-S1
▶ Overseas	Part Number	BCV27, BCV47
▶ Equivalent	Part Number	BCV27, BCV47

"S1" means SOT-23

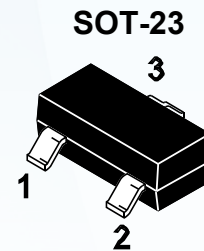
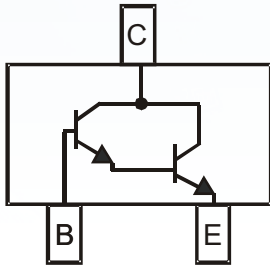
EV is the abbreviation of name EVVO

NPN Darlington Transistor

Features

- High Collector Current
- High Current Gain

Equivalent Circuit



1.Base 2.Emitter 3.Collector

Marking Code:

EVBCV27-S1 : FF

EVBCV47-S1 : FH

EVBCV27-S1 EVBCV47-S1

Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	40	V
EVBCV27-S1		80	
Collector Emitter Voltage	V_{CEO}	30	V
EVBCV47-S1		60	
Emitter Base Voltage	V_{EBO}	10	V
Collector Current	I_C	500	mA
Peak Collector Current	I_{CM}	800	mA
Base Current	I_B	100	mA
Maximum Power Dissipation	P_D	200	mW
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-65 to +150	°C

NPN Darlington Transistor

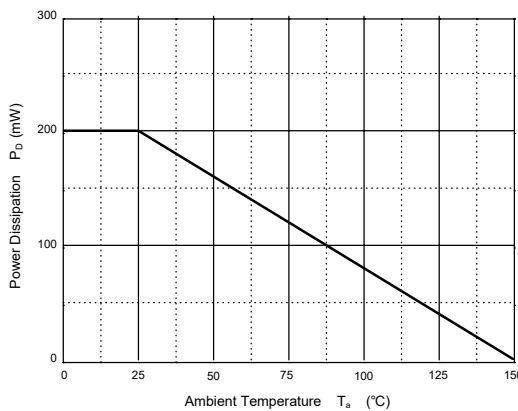
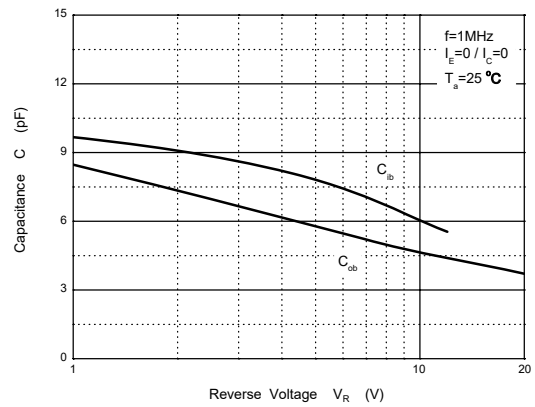
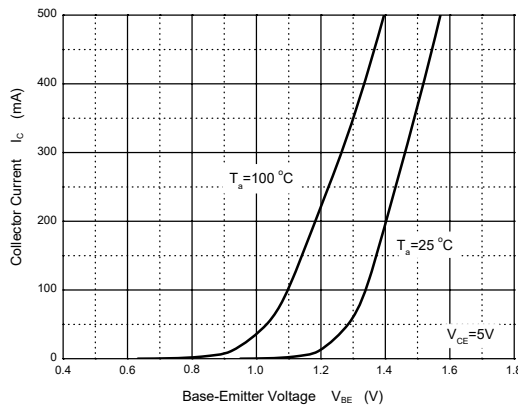
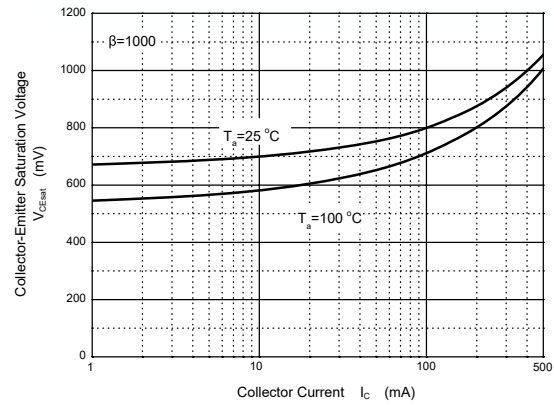
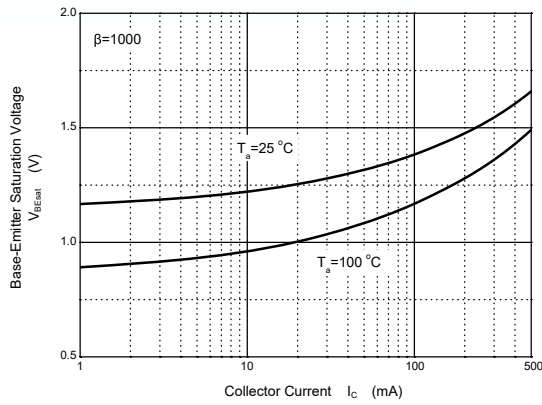
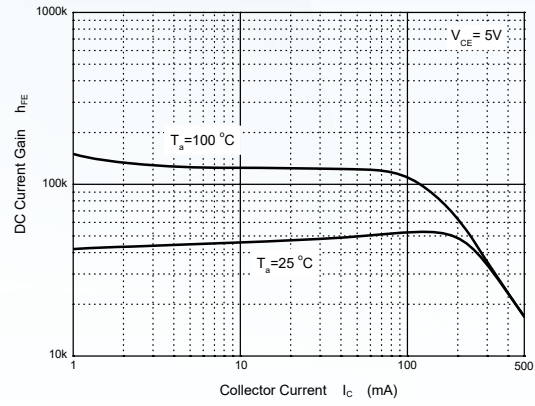
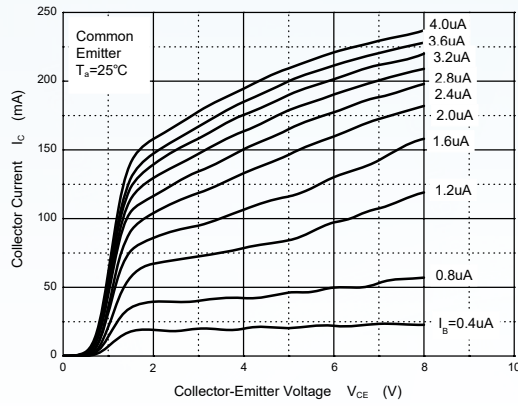
Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain					
at $V_{CE} = 5\text{ V}$, $I_C = 1\text{ mA}$	EVBCV27-S1	4000	--	--	
	EVBCV47-S1	2000	--	--	
at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$	EVBCV27-S1	10000	--	--	--
	EVBCV47-S1	4000	--	--	
at $V_{CE} = 5\text{ V}$, $I_C = 100\text{ mA}$	EVBCV27-S1	20000	--	--	
	EVBCV47-S1	10000	--	--	
Collector Base Cutoff Current					
at $V_{CB} = 30\text{ V}$	EVBCV27-S1	--	--	100	nA
at $V_{CB} = 60\text{ V}$	EVBCV47-S1	--	--	100	
Emitter Base Cutoff Current					
at $V_{EB} = 10\text{ V}$		--	--	100	nA
Collector Base Breakdown Voltage					
at $I_C = 100\text{ }\mu\text{A}$	EVBCV27-S1	40	--	--	V
	EVBCV47-S1	80	--	--	
Collector Emitter Breakdown Voltage					
at $I_C = 10\text{ mA}$	EVBCV27-S1	30	--	--	V
	EVBCV47-S1	60	--	--	
Emitter Base Breakdown Voltage					
at $I_E = 10\text{ }\mu\text{A}$		10	--	--	V
Collector Emitter Saturation Voltage					
at $I_C = 100\text{ mA}$, $I_B = 0.1\text{ mA}$		--	--	1	V
Base Emitter Saturation Voltage					
at $I_C = 100\text{ mA}$, $I_B = 0.1\text{ mA}$		--	--	1.5	V
Base Emitter On Voltage					
at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$		--	--	1.4	V
Transition Frequency					
at $V_{CE} = 5\text{ V}$, $I_C = 30\text{ mA}$, $f = 100\text{ MHz}$	F_T	--	220	--	MHz

NPN Darlington Transistor

Typical Characteristic Curves

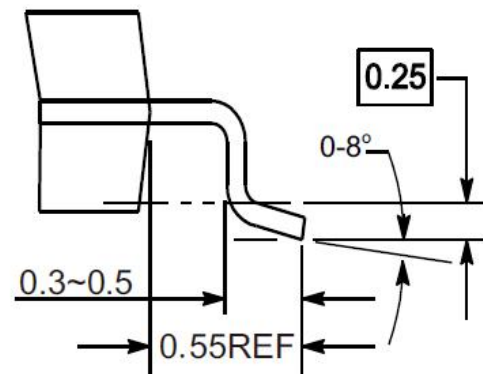
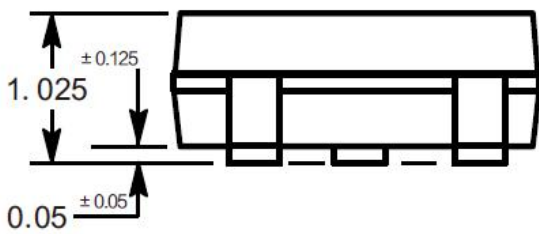
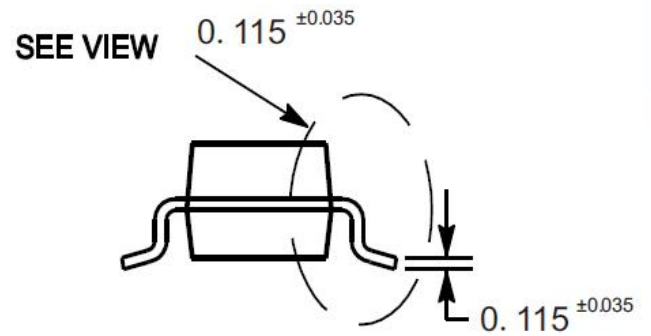
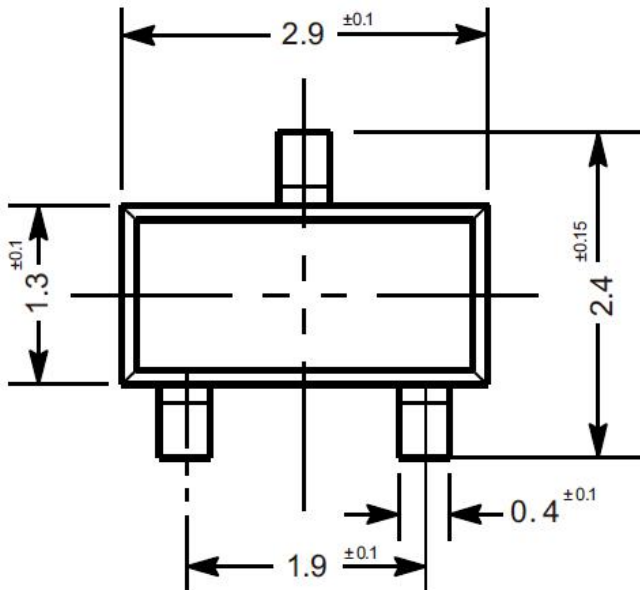


NPN Darlington Transistor

Package Outline

SOT-23

Dimensions in mm



VIEW C

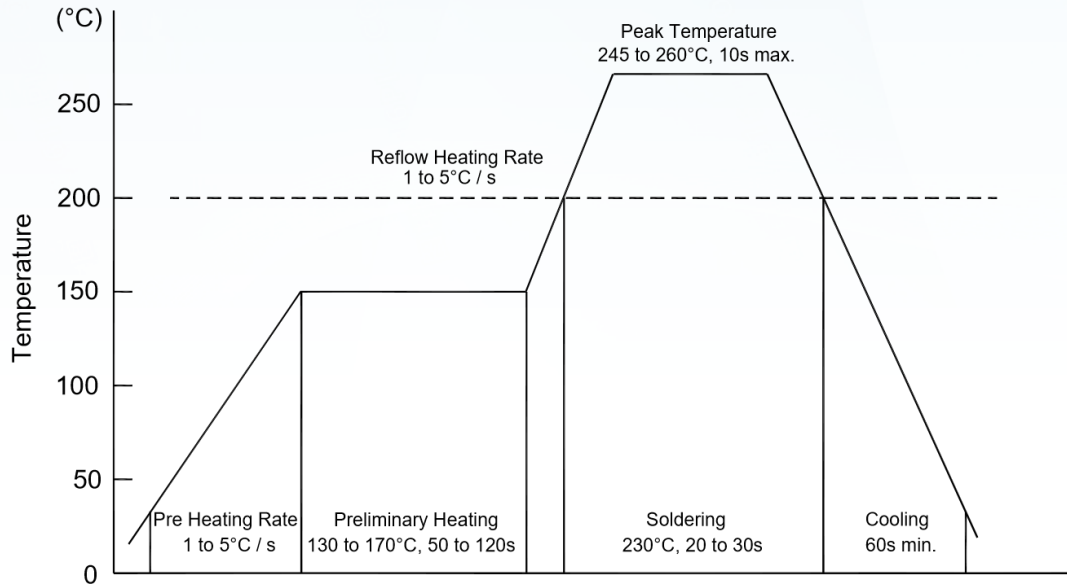
Ordering Information

Device	Package	Shipping
EVBCV27-S1, EVBCV47-S1	SOT-23	3,000PCS/Reel&7inches

NPN Darlington Transistor

Conditions of Soldering and Storage

◆ Recommended condition of reflow soldering



Recommended peak temperature is over 245 °C. If peak temperature is below 245 °C, you may adjust the following parameters:

- Time length of peak temperature (longer)
- Time length of soldering (longer)
- Thickness of solder paste (thicker)

◆ Conditions of hand soldering

- Temperature: 370 °C
- Time: 3s max.
- Times: one time

◆ Storage conditions

- **Temperature**
5 to 40 °C
- **Humidity**
30 to 80% RH
- **Recommended period**
One year after manufacturing

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