

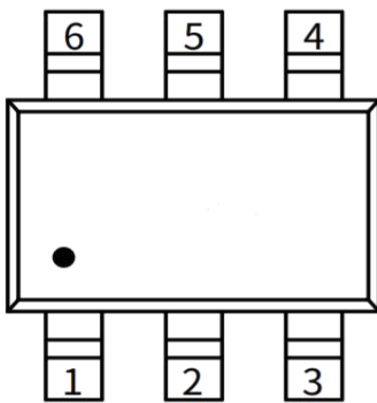
Product Summary

- VCC = 50V
- IC = 100mA
- R1 = 4.7kΩ
- R2 = 47kΩ

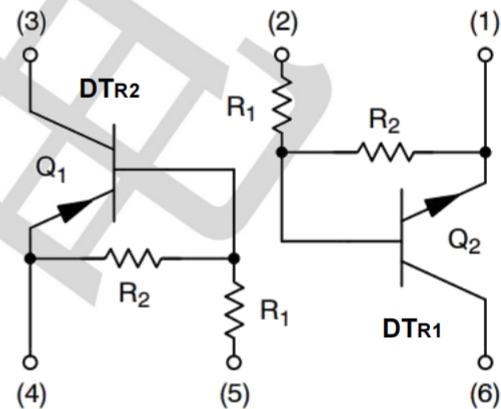
Features

- Built-in bias resistors
- making device design easy
- almost completely eliminating parasitic effects

Circuit diagram and pin information



SOT-363



Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value		Unit
		DTR1	DTR2	
Supply Voltage	VCC	50	-50	V
Input Voltage	VIN	-5 to +30	-30 to +5	V
Output Current	IO	100	-100	mA
peak collector current	ICM	100	-100	mA
Power Dissipation	PD	150		mW
Operating Junction Temperature Range	TJ	-55 ~ +150		°C
Storage Temperature Range	TSTG	-55 ~ +150		°C

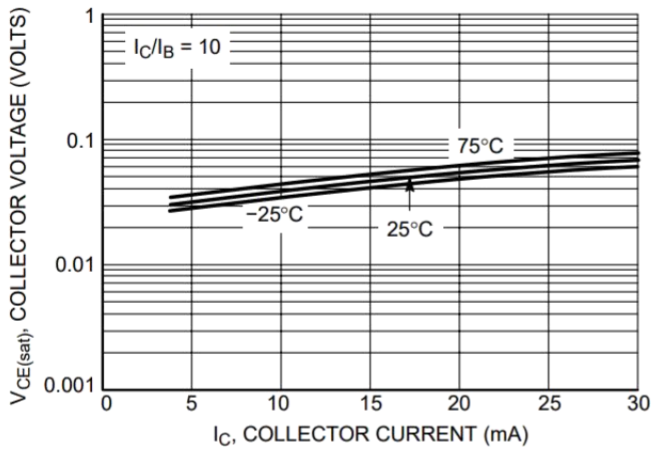
Electrical Characteristics-DTR1 NPN (TA=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Input Voltage	V _{I(off)}	--	0.5	--	V	V _{CC} = 5V, I _O = 100μA
	V _{I(on)}	--	0.9	--	V	V _O = 0.2V, I _O = 5mA
Output Voltage	V _{O(on)}	--	--	0.3	V	I _O = 10mA, I _I = 0.5mA
Input Current	I _I	--	--	360	μA	I _I = 5V
Output Current	I _{O(off)}	--	--	500	nA	V _{CC} = 50V, V _I = 0V
DC Current Gain	G _I	80	--	--	--	V _O = 5V, I _O = 5mA
Input Resistor	R ₁	3.3	4.7	6.1	kΩ	
Resistance ratio	R _{2/R1}	8	10	12	--	
Gain-Bandwidth Product	f _r	--	250	--	MHz	V _{CE} = 10V, I _E = 5mA, f = 100MHz

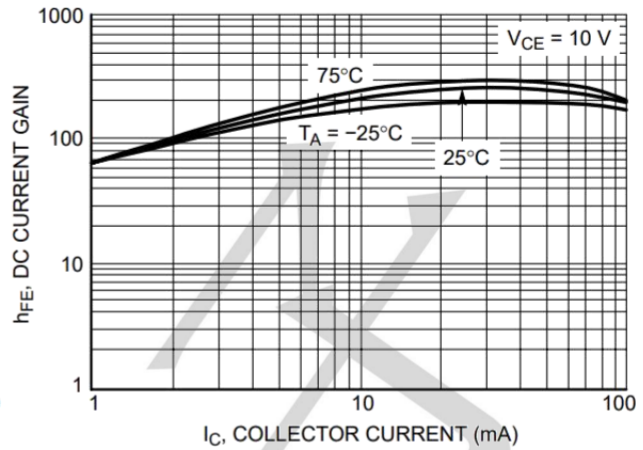
Electrical Characteristics-DTR2 PNP(TA=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Input Voltage	V _{I(off)}	--	-0.5	--	V	V _{CC} = -5V, I _O = -100μA
	V _{I(on)}	--	-0.9	--	V	V _O = -0.2V, I _O = -5mA
Output Voltage	V _{O(on)}	--	--	-0.3	V	I _O = -10mA, I _I = -0.5mA
Input Current	I _I	--	--	-360	μA	I _I = -5V
Output Current	I _{O(off)}	--	--	-500	nA	V _{CC} = -50V, V _I = 0V
DC Current Gain	G _I	80	--	--	--	V _O = -5V, I _O = -5mA
Input Resistor	R ₁	3.3	4.7	6.1	kΩ	
Resistance ratio	R _{2/R1}	8	10	12	--	
Gain-Bandwidth Product	f _r	--	250	--	MHz	V _{CE} = -10V, I _E = -5mA, f = 100MHz

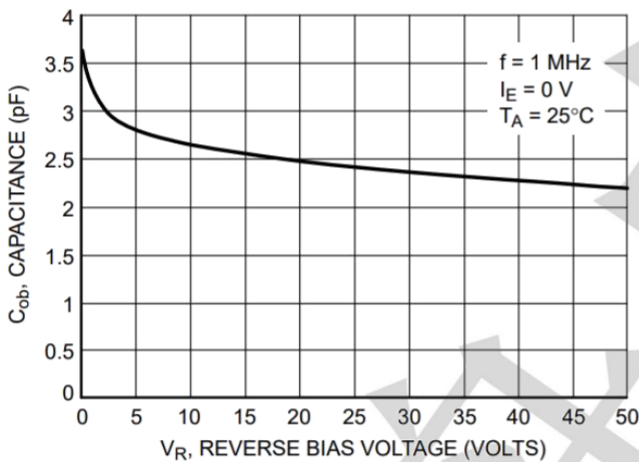
Typical Performance Characteristics (TA=25°C unless otherwise Specified)



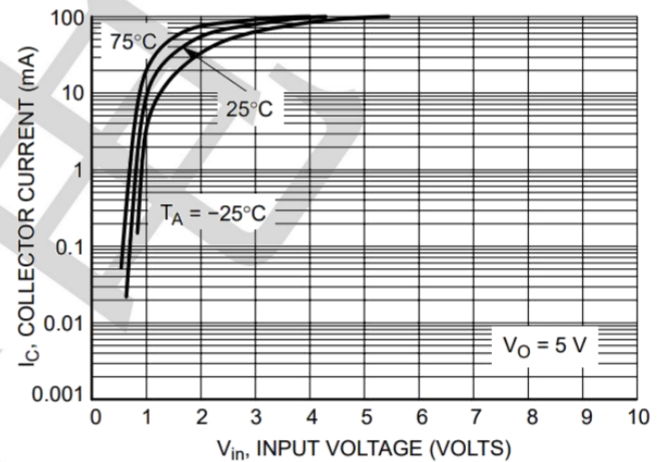
$V_{CE(sat)}$ versus I_C



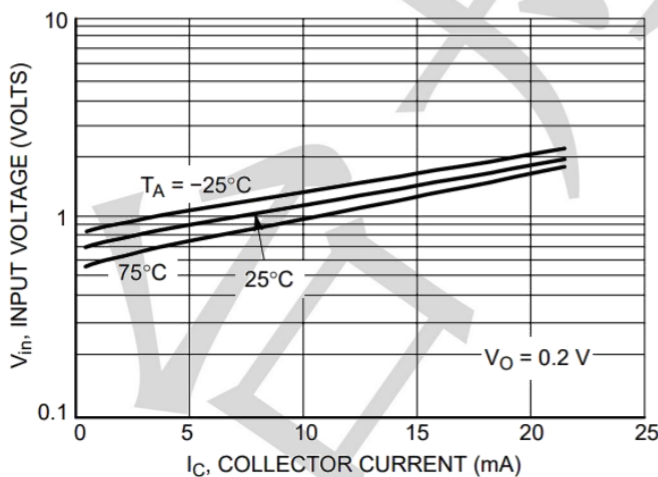
DC Current Gain



Output Capacitance



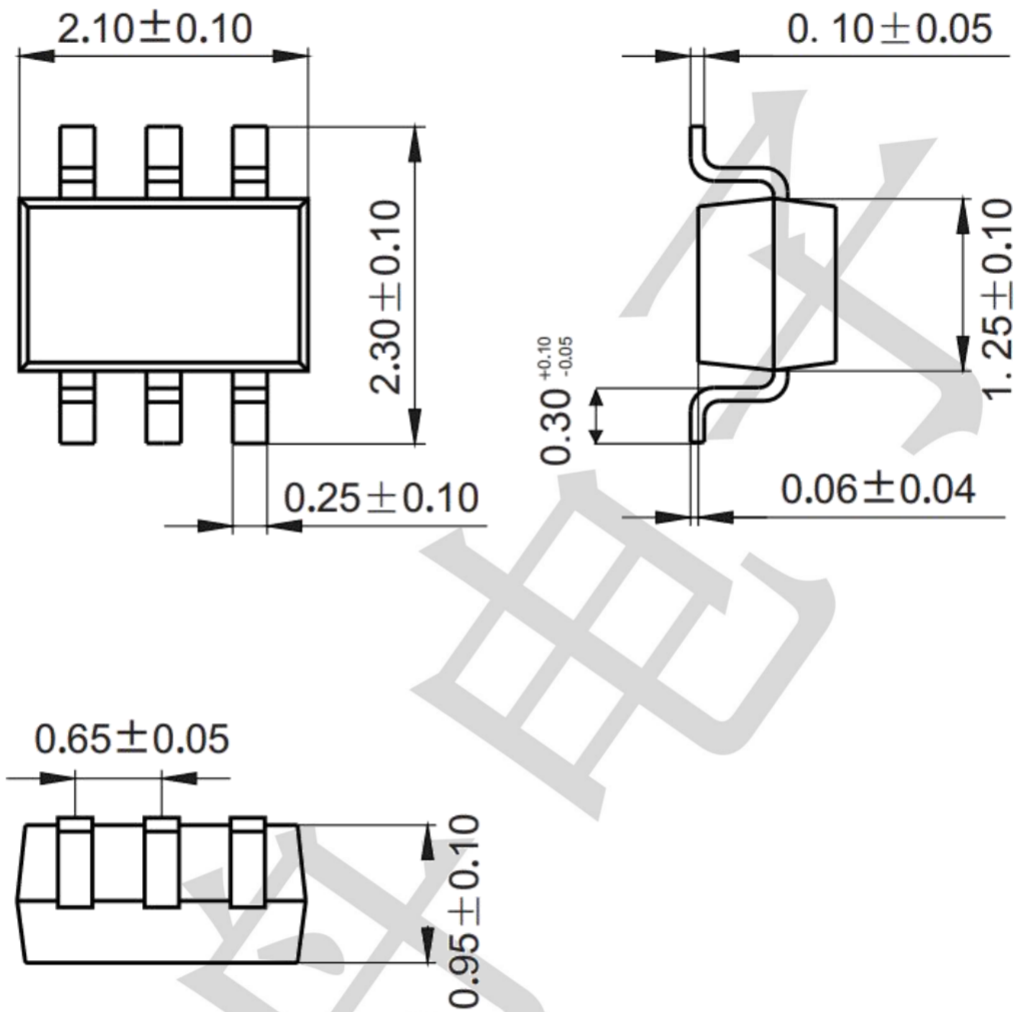
Output Current versus Input Voltage



Input Voltage versus Output Current

Package information (Unit: mm)

SOT-363



Mounting Pad Layout (unit: mm)

