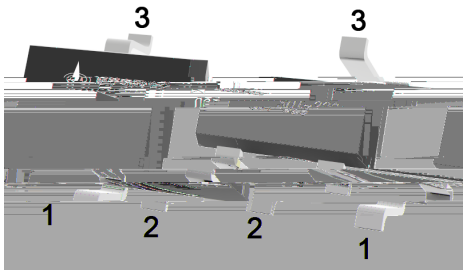
SOT-323 NPN Silicon NPN Digital Transistor in a SOT-323 Plastic Package.

AEC-Q101

With built-in bias resistors, simplify circuit design, reduce a quantity of parts and manufacturing process, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

Switching, Inverter circuit, Interface circuit and driver circuit applications, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit



PIN1 Base PIN 2 Emitter PIN 3 Collector

/ h

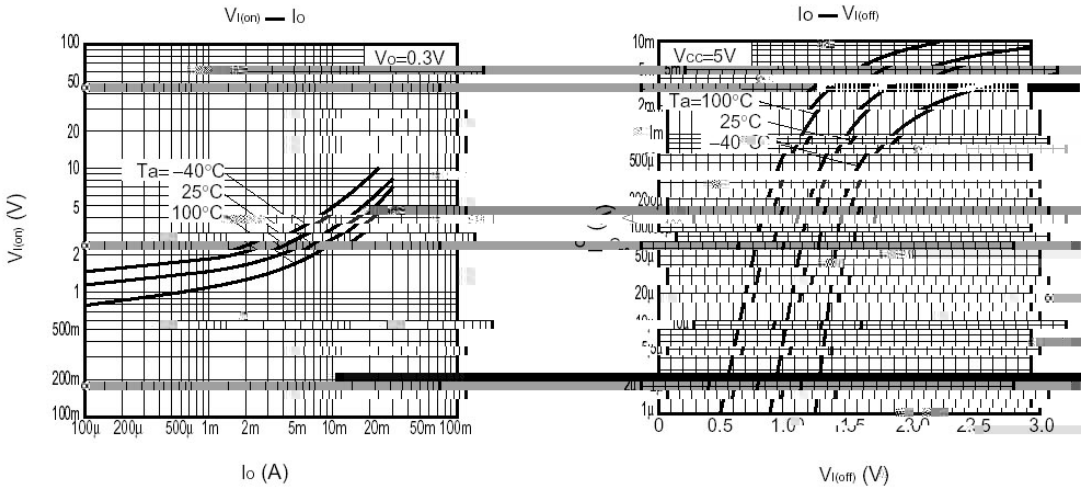
/ Absolute Maximum Ratings(Ta=25)

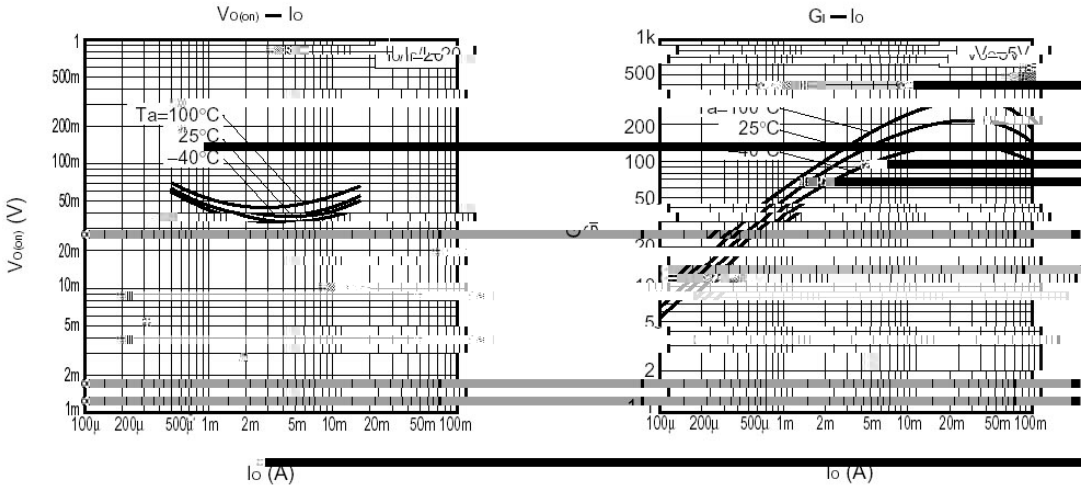
Parameter	Symbol	Rating	Unit
Output Voltage	V_{CC}	50	V
Input Voltage	V_{IN}	40	V
		-10	V
Output Current	I_C	100	mA
	I_O	30	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

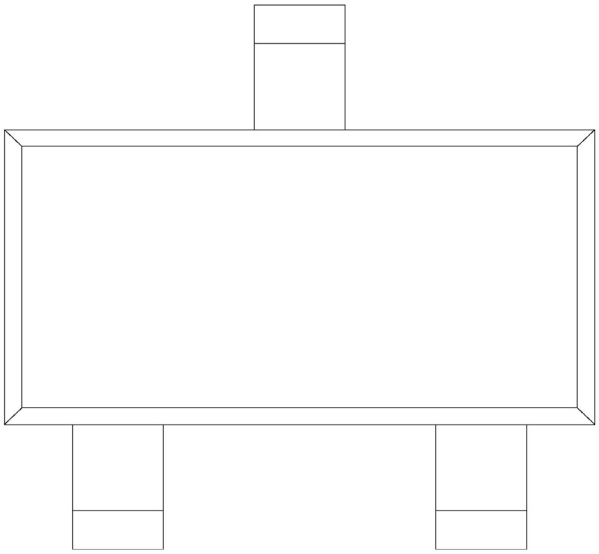
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Voltage	$V_{I(off)}$	v_{CC}=5.0V I_O=100μA			0.5	V
	$V_{I(on)}$	V_O=0.3V I_O=2.0mA	3.0			V
Output Voltage	$V_{O(on)}$	I_O=10 mA I_I=0.5mA			0.3	V
Input Current	I_I	V_I=5.0V			0.18	mA
Output Cut-off Current	$I_{O(off)}$	V_{CC}=50V V_I=0V			0.5	μA
DC Current Gain	G_I	V_O=5.0V I_O=5.0mA	68			
Transition Frequency	f_T	V_{CE}=10V I_E=-5.0mA f=100MHz		250		MHz
Resistance1	R_1		32.9	47	61.1	KΩ
Resistance Ratio	R_2/R_1		0.8	1.0	1.2	

/ Electrical Characteristic Curve





/ Marking Instructions



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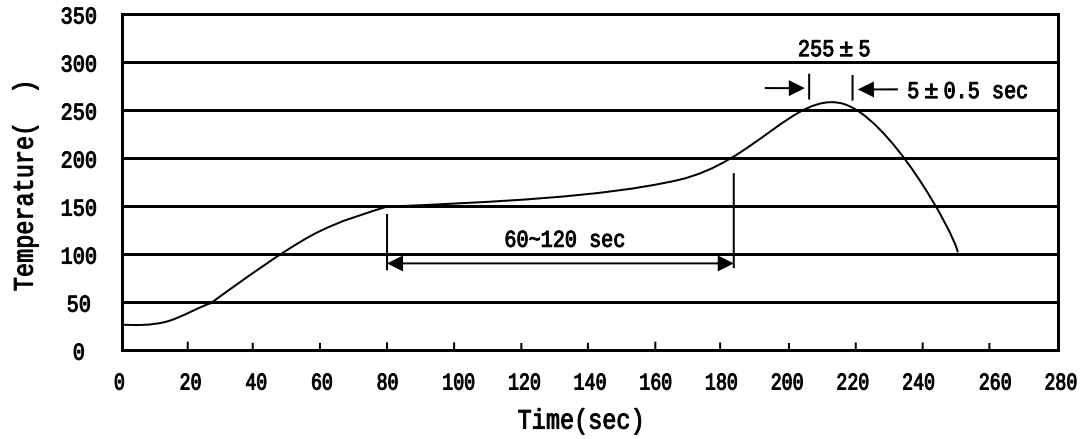
Note:

Q:	Automobile halogen-free product Code
26	Product Type Code

( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

1		150	200		60	120sec;	1.Preheating:150~200 , Time:60~120sec.
2		255±5				5±0.5sec;	2.Peak Temp.:255±5 , Duration:5±0.5sec.
3				2	10	/sec.	3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5	10±1 sec.	Temp:260±5	Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension		(unit mm³)
SOT-323	3,000	10	30,000	6	180,000	7 ×8	180×120×180	390×385×205

/ Notices