PRODUCT NAME : 2N6427 NPN Darlington Transistor (Pack of 5)

PRICE : Rs 20.00
SKU : RM2107

DESCRIPTION

Features

- Collector-Emitter Volt (Vceo): 40V
- Collector-Base Volt (Vcbo): 40V
- Collector Current (Ic): 0.5A
- hfe: 20,000-200,000 @ 100mA
- Power Dissipation (Ptot): 625mW
- Type: NPN

2N6426, 2N6427

2N6426 is a Preferred Device

Darlington Transistors

NPN Silicon

Features

- These are Pb–Free Devices*

ON Semiconductor®

http://onsemi.com

COLLECTOR 3
BASE 2
EMITTER 1

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector – Emitter Voltage	V_{CEO}	40	Vdc
Collector – Base Voltage	V_{CBO}	40	Vdc
Emitter – Base Voltage	V_{EBO}	12	Vdc
Collector Current – Continuous	I_C	500	mAdc
Total Device Dissipation @ T_A = 25°C Derate above 25°C	P_D	625 5.0	mW mW/°C
Total Device Dissipation @ T_C = 25°C Derate above 25°C	P_D	1.5 12	W mW/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	–55 to +150	°C

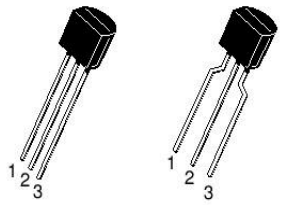
THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction–to–Ambient	$R_{\theta JA}$	200	°C/W
Thermal Resistance, Junction–to–Case	$R_{\theta JC}$	83.3	°C/W

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

*For additional information on our Pb–Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

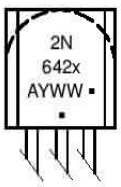
TO–92
CASE 29
STYLE 1



STRAIGHT LEAD
BULK PACK

BENT LEAD
TAPE & REEL
AMMO PACK

MARKING DIAGRAM



x = 6 or 7
A = Assembly Location
Y = Year
WW = Work Week
▪ = Pb–Free Package

(Note: Microdot may be in either location)

ORDERING INFORMATION

See detailed ordering and shipping information in the package dimensions section on page 5 of this data sheet.

Preferred devices are recommended choices for future use and best overall value.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic		Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS						
Collector–Emitter Breakdown Voltage, (Note 1) (I_C = 10 mAdc, V_{BE} = 0)		$V_{(BR)CEO}$	40	–	–	Vdc
Collector–Base Breakdown Voltage (I_C = 100 μAdc, I_E = 0)		$V_{(BR)CBO}$	40	–	–	Vdc
Emitter–Base Breakdown Voltage (I_E = 10 μAdc, I_C = 0)		$V_{(BR)EBO}$	12	–	–	Vdc
Collector Cutoff Current (V_{CE} = 25 Vdc, I_B = 0)		I_{CES}	–	–	1.0	μAdc
Collector Cutoff Current (V_{CB}= 30 Vdc, I_E = 0)		I_{CBO}	–	–	50	nAdc
Emitter Cutoff Current (V_{EB}= 10 Vdc, I_C = 0)		I_{EBO}	–	–	50	nAdc
ON CHARACTERISTICS						
DC Current Gain, (Note 1)		h_{FE}				–
(I_C = 10 mAdc, V_{CE} = 5.0 Vdc)	2N6426		20,000	–	200,000	
	2N6427		10,000	–	100,000	
(I_C = 100 mAdc, V_{CE} = 5.0 Vdc)	2N6426		30,000	–	300,000	
	2N6427		20,000	–	200,000	
(I_C = 500 mAdc, V_{CE} = 5.0 Vdc)	2N6426		20,000	–	200,000	
	2N6427		14,000	–	140,000	
Collector–Emitter Saturation Voltage		$V_{CE(sat)}$				Vdc
(I_C = 50 mAdc, I_B = 0.5 mAdc)			–	0.71	1.2	
(I_C = 500 mAdc, I_B = 0.5 mAdc			–	0.9	1.5	
Base–Emitter Saturation Voltage (I_C = 500 mAdc, I_B = 0.5 mAdc)		$V_{BE(sat)}$	–	1.52	2.0	Vdc
Base–Emitter On Voltage (I_C = 50 mAdc, V_{CE} = 5.0 Vdc)		$V_{BE(on)}$	–	1.24	1.75	Vdc
SMALL–SIGNAL CHARACTERISTICS						
Output Capacitance (V_{CB} = 10 Vdc, I_E = 0, f = 1.0 MHz)		C_{obo}	–	5.4	7.0	pF
Input Capacitance (V_{EB} = 1.0 Vdc, I_C = 0, f = 1.0 MHz)		C_{ibo}	–	10	15	pF
Input Impedance		h_{ie}				kΩ
(I_C = 10 mAdc, V_{CE} = 5.0 Vdc, f = 1.0 kHz)	2N6426		100	–	2000	
	2N6427		50	–	1000	
Small–Signal Current Gain		hfe				–
(I_C = 10 mAdc, V_{CE} = 5.0 Vdc, f = 1.0 kHz)	2N6426		20,000	–	–	
	2N6427		10,000	–	–	
Current–Gain – High Frequency		$\|h_{fe}\|$				–
(I_C = 10 mAdc, V_{CE} = 5.0 Vdc, f = 100 MHz)	2N6426		1.5	2.4	–	
	2N6427		1.3	2.4	–	
Output Admittance (I_C = 10 mAdc, V_{CE} = 5.0 Vdc, f = 1.0 kHz)		h_{oe}	–	–	1000	μmhos
Noise Figure (I_C = 1.0 mAdc, V_{CE} = 5.0 Vdc, R_S = 100 kΩ, f = 1.0 kHz)		NF	–	3.0	10	dB

1. Pulse Test: Pulse Width ≤ 300 μs; Duty Cycle ≤ 2.0%.