SY6283/SY6283A

Low Loss Power Distribution Load Switch
3A continuous, 4A peak current

General Description

The SY6283 and SY6283A are ultra-low $R_{DS(ON)}$ switches with current limiting function to protect the power source from over current and short circuit conditions.

Ordering Information

SY6283 □(□□)□

- Temperature Code
- Package Code
- Optional Spec Code

Ordering Number	Package type	Note
SY6283DRC	DFN1.2×1.6-4	3A/Active High
SY6283ADRC	DFN1.2×1.6-4	3A/Active High

Features

- Distribution Voltages: 2.5V to 5.5V
- Over Temperature Shutdown and Automatic Retry
- Reverse Blocking (No Body Diode)
- At shutdown, OUT Can Be Forced Higher than IN
- Built-in Soft-start
- Output Discharge Function
  - ✧ SY6283: No Output Discharge Function
  - ✧ SY6283A: Auto Output Discharge Function
- RoHS Compliant and Halogen Free
- Compact Packages Minimize Board Space: DFN1.2×1.6-4

Typical Application Circuit

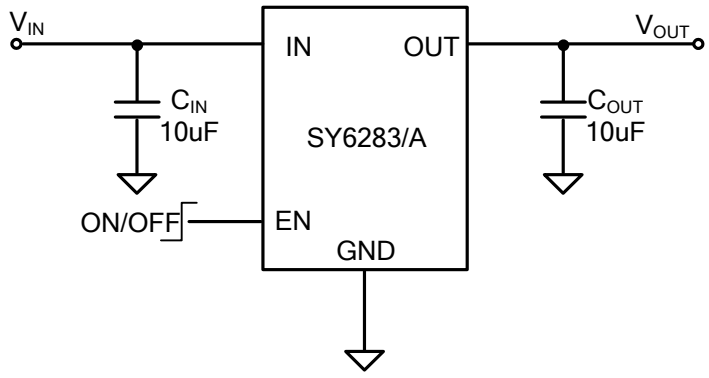


Figure 1. Schematic Diagram

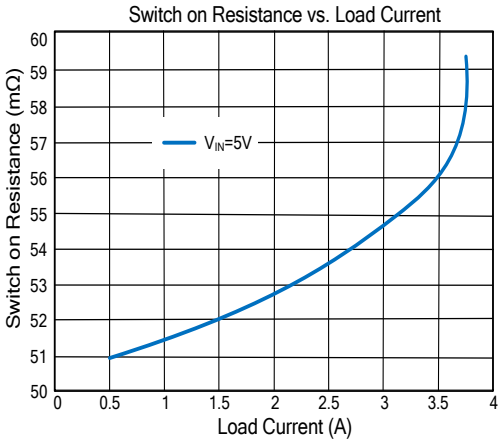
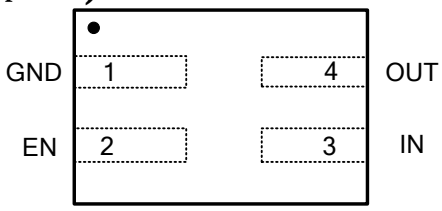


Figure 2. Typical Perform Characteristic

Pin Configurations (Top View)



DFN1.2×1.6-4

Top mark: **LP*xyz*** for SY6283(Device code: LP, ***x=year code, y=week code, z= lot number code***)
MW*xyz* for SY6283A(Device code: MW, ***x=year code, y=week code, z= lot number code***)

Functional Pin Description

Pin Name	Pin number	Pin Description
GND	1	Ground pin.
EN	2	ON/OFF control. Do not leave it floating.
IN	3	Input pin. Decouple this pin to GND with a 4.7μF input capacitor.
OUT	4	Output pin.

Absolute Maximum Ratings (Note 1)

All pins---------- 6V
Power Dissipation, P_D @ T_A = 25°C DFN1.2×1.6-4----------0.5W
Package Thermal Resistance (Note 2)
θ_{JA} ----------200°C/W
θ_{JC} ----------70°C/W
Junction Temperature Range ---------- -40°C to 125°C
Lead Temperature (Soldering, 10 sec.) ----------260°C
Storage Temperature Range ---------- -65°C to 150°C

Recommended Operating Conditions (Note 3)

IN---------- 2.5V to 5.5V
EN---------- -0.3V to V_{IN}+0.3V
All other pins ---------- 0-5.5V
Junction Temperature Range ---------- -40°C to 125°C
Ambient Temperature Range ---------- -40°C to 85°C

Electrical Characteristics

(V_{IN} = 5V, C_L=1uF, per channel, T_A = 25°C unless otherwise specified)

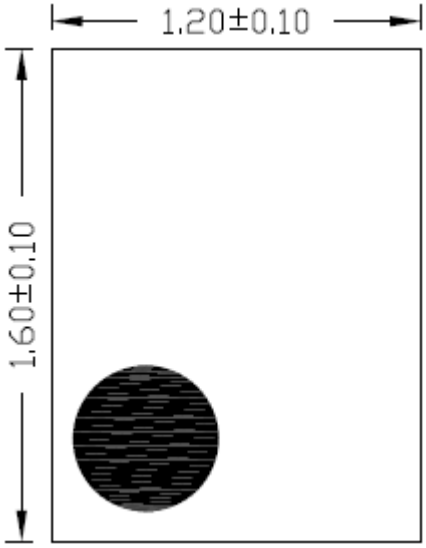
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Voltage Range	V_{IN}		2.5		5.5	V
Shutdown Input Current	I_{SHDN}	Output grounded, switch off		0.1	1	μA
Quiescent Supply Current	I_Q	Open load, switch on		32		μA
FET RON	$R_{DS(ON)}$			60		mΩ
Current Limit	I_{LIM}		3.0	3.85	4.7	A
EN Rising Threshold	V_{IH}		2			V
EN Falling Threshold	V_{IL}				0.8	V
IN UVLO Threshold	$V_{IN,UVLO}$				2.4	V
IN UVLO Hysteresis	$V_{IN,HYS}$			0.1		V
Rising Time	t_{Rising}	R_L=5 Ω, C_L=1uF		0.75		ms
Thermal Shutdown Temperature	T_{SD}			150		°C
Thermal Shutdown Hysteresis				20		°C
Output Discharge Resistor	R_{DSC}	SY6283A		10		Ω

Note 1: Stresses beyond "Absolute Maximum Ratings" may cause permanent damage to the device. These are for stress ratings. Functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

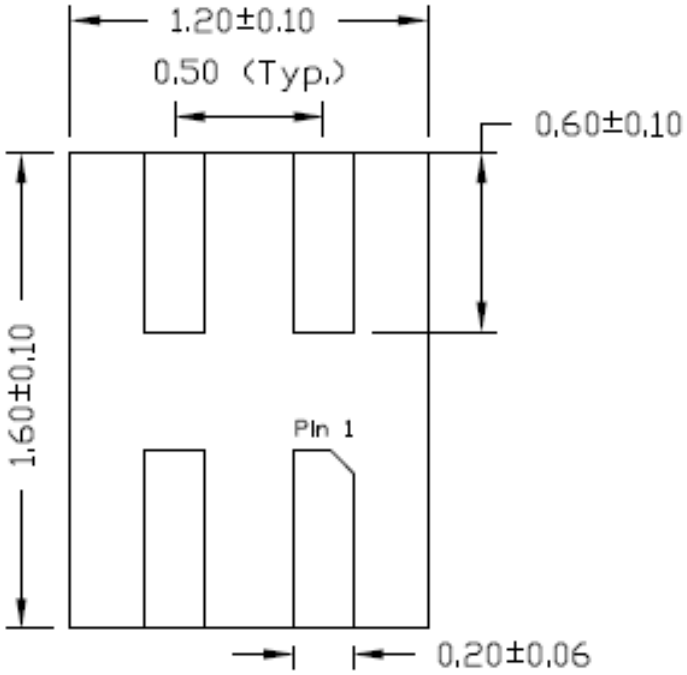
Note 2: θ_{JA} is measured in the natural convection at T_A = 25°C on a low effective single layer thermal conductivity test board of JEDEC 51-3 thermal measurement standard.

Note 3: The device is not guaranteed to function outside its operating conditions.

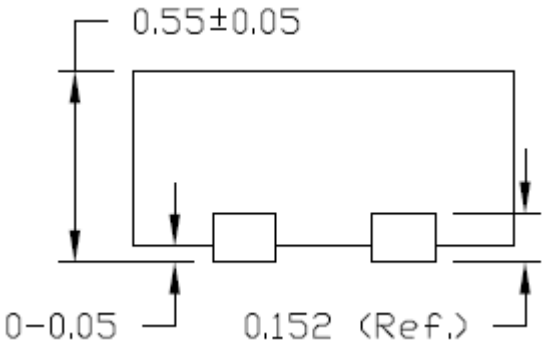
DFN1.2×1.6-4 Package Outline



Top View



Bottom View

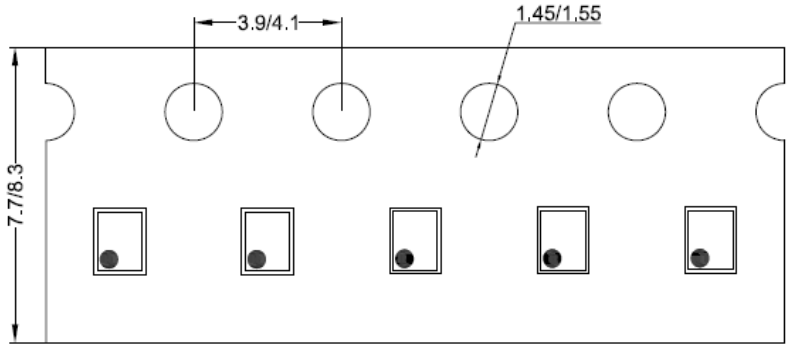


Side View

Notes: **All dimension in millimeter and exclude mold flash & metal burr.**

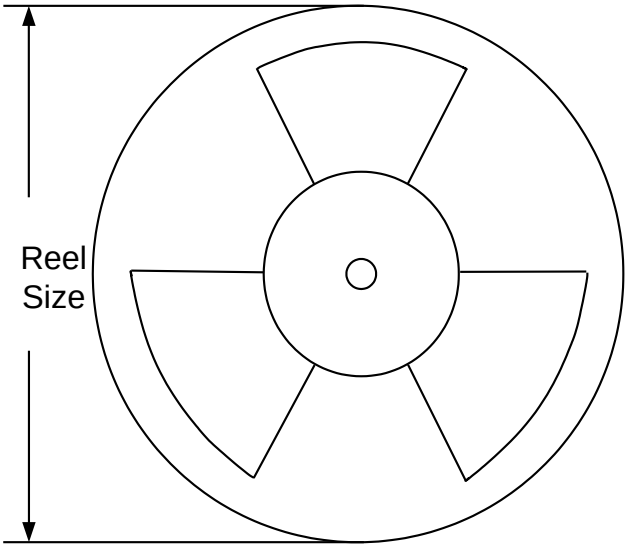
Taping & Reel Specification

1. DFN1.2x1.6 taping orientation



Feeding direction →

2. Carrier Tape & Reel specification for packages



Package types	Tape width (mm)	Pocket pitch(mm)	Reel size (Inch)	Trailer length(mm)	Leader length (mm)	Qty per reel
DFN1.2x1.6	8	4	7"	400	160	3000

3. Others: NA

单击下面可查看定价，库存，交付和生命周期等信息

>>SILERGY(矽力杰)