

Non-insulation, 8-pin SMD type

TDK DC-DC Converter

SZC SERIES

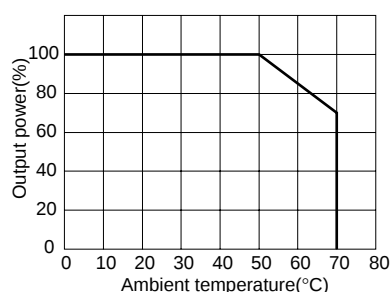
SPECIFICATIONS AND STANDARDS

PART NO.		SZC12P25	SZC15P20	SZC12N25	SZC15N20
Maximum output power	W	0.3	0.3	0.3	0.3
INPUT CONDITIONS					
Input voltage E _{dc}	V	+4.5 to +5.5(+5typ.)			
Efficiency(typ.)* ¹	%	70	70	60	60
OUTPUT CHARACTERISTICS AND OTHERS					
Output voltage E _{dc}	V	+12	+15	−12	−15
Maximum output current	mA	25	20	25	20
Output voltage setting deviation(max.)	V	±0.5	±0.6	±0.5	±0.6
Voltage stability	Input variation	%	2	3	3.5
	Load variation* ²	%	2	2	2
	Temperature variation* ³	%	8	9	12.5
Ripple noise E _{p-p} (typ.)* ⁴	mV	300	300	300	300

*¹ Typical input voltage, maximum output current.*² The value for the variation of 10 to 100% rated output current.*³ The value when the temperature is changed from 0 to +50°C for the rated input and output.*⁴ Output ripple is determined by I/O rating at 25°C.

OUTPUT POWER - AMBIENT TEMPERATURE(DERATING)

Derating is necessary when ambient temperature exceeds 50°C.



PACKAGING STYLE AND QUANTITY

- Exclusive magazine for DC to DC converter's packaging(42 pieces/magazine)
- Emboss taping(700 pieces)

PRECAUTIONS

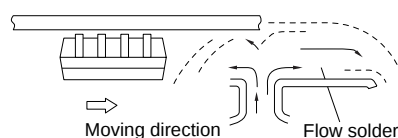
- Parallel operation to increase output current is not possible.
- **Input fuse**
A 0.2A fuse should be connected to the input.
- Input terminal ripple voltage can be reduced by connection of a 47μF capacitor to the input side.

Soldering conditions

(1) Flow/Dipping

Solder temperature: 260°C max.

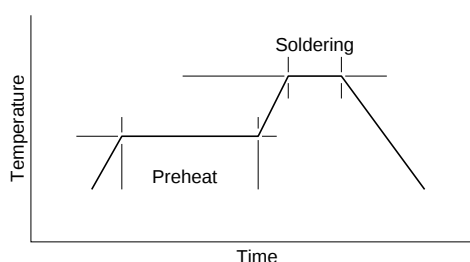
Dipping time: 10±1s(After dipping, cool the board as natural cooling.)



(2) Reflow soldering

Preheating: 150±10°C, 1min minimum

Soldering: 235°C max., 10s max.(However, over 200°C: 40s minimum)



Cleaning conditions

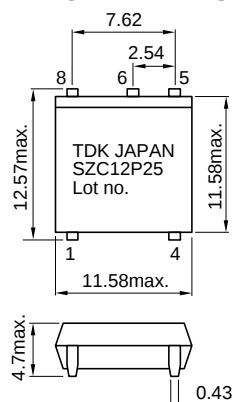
Solvent: IPA

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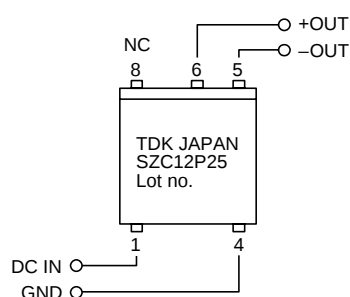
SHAPES AND DIMENSIONS



Dimensions in mm



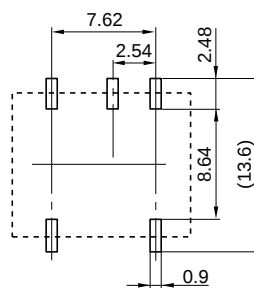
CIRCUIT DIAGRAM



Terminal connection

No.1	Vin(+5V input)
No.4	GND
No.5	-V output(Not connected when +V output, NC)
No.6	+V output(Not connected when -V output, NC)
No.8	NC

RECOMMENDED SOLDERING PATTERN



Oscillating method: Astable frequency method

Oscillating frequency: Approx. 250kHz(100% load) to approx.

1000kHz(no load)

MTTF: 135Fit(7400000h, 100% load)

COMMON SPECIFICATIONS

AUXILIARY FUNCTIONS

Overcurrent protection	No
Remote ON-OFF	No

CONSTRUCTIONS

External dimensions	mm	11.58×4.7×12.57(W×H×D)
Weight	g	1.8

TEMPERATURE AND HUMIDITY

Operating temperature range	°C	0 to +70[Derating is necessary when operating environment temperature exceed 50°C.]
Storage temperature range	°C	-40 to +85
Operating humidity range	(%)RH	20 to 95[Maximum wet-bulb temperature: 38°C, without dewing]
Storage humidity range	(%)RH	20 to 95[Maximum wet-bulb temperature: 38°C, without dewing]