

# Data Sheet

## PD2550U03W

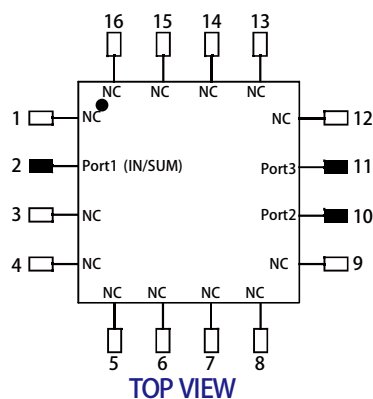
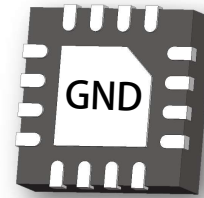
Power Divider/Combiner

2-Way 0° 50 Ω 500-4500 MHz



### Features

- Small Size (3 × 3mm QFN package)
- Passive RF IC, no need external DC power supply
- No need external 100 Ω resistor
- Very Low Loss
- Tight Amplitude Balance
- High Isolation
- Low VSWR
- Good Repeatability
- Tape & Reel
- Operating Temperature -40°C~85°C
- Power handling
  - 2 Watts as a divider
  - 0.5 Watts as a combiner

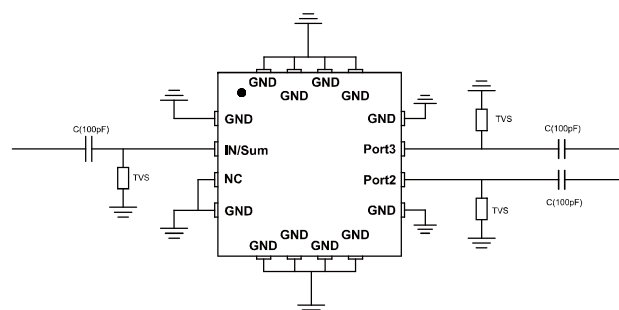


### Applications

- Wireless communications
- WLAN / WiMax
- SAT Radio
- ISM band instrument
- Information System for Automotive Safety

#### Notes:

1. This part has passed through 100% RF test.
2. Suggest to add Capacitors of DC Blocker between Pins (with black color) and external circuit to prevent DC signal entry to guarantee parts normal work.
3. Suggest to add a TVS Diode in parallel between Electrode (with black color) and Capacitor of DC Blocker to provide ESD protection for the product. TVS Diode use ON Semiconductor's ESD9101 is recommended.



#### ESD Rating

Human Body Model (HBM): ≤ 450V in accordance with ANSI/ESD STM 5.1 - 2001

Machine Model (MM): ≤ 100V in accordance with ANSI/ESD STM 5.2 - 1999

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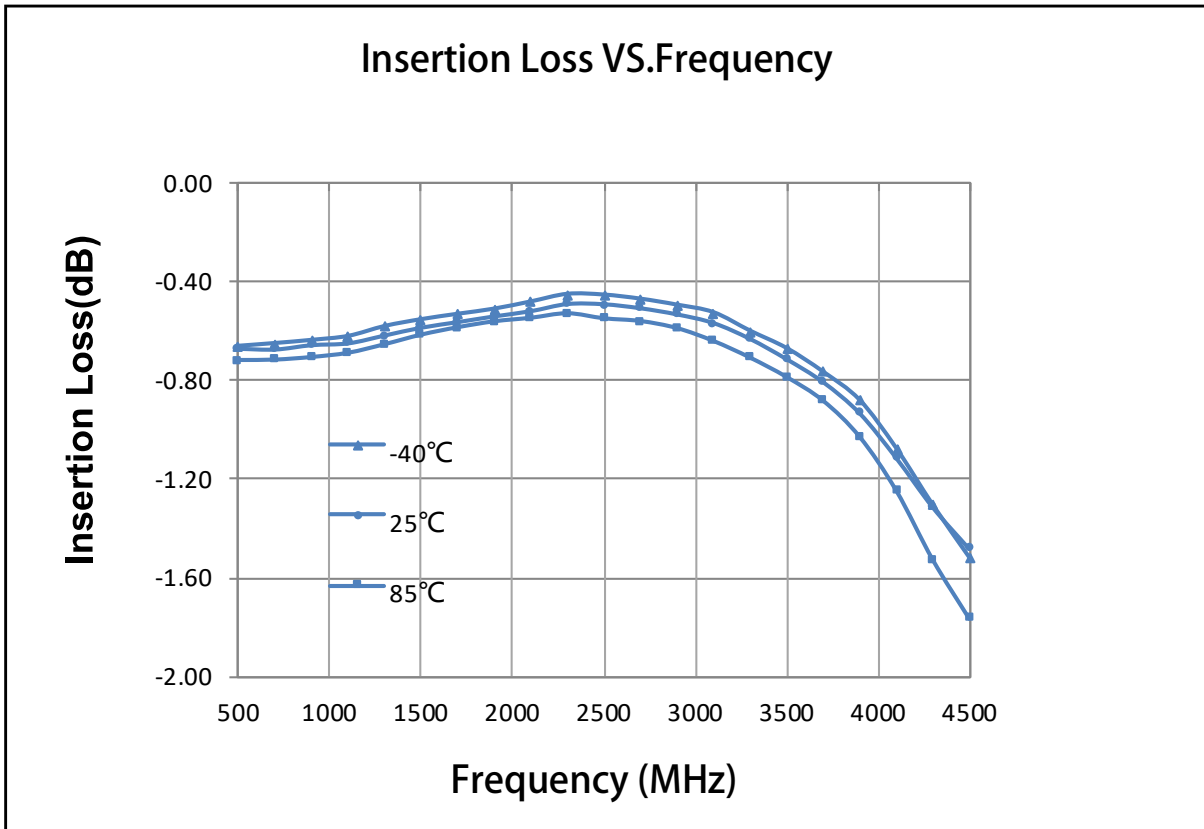
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Electrical Specifications at 25° C

Parameter	Symbol	Min	Typ	Max	Unit
Frequency Range	F	500		4500	MHz
Insertion Loss (Above 3dB)	I <sub>L</sub>		0.7	2	dB
Isolation	Isol	6.0	20.6		dB
Phase balance	∅ <sub>bal</sub>		1	3	deg
Amplitude balance	A <sub>bal</sub>		0.04	0.20	dB
IRL(S11)			-26.6	-10.2	dB
ORL(S22/S33)			-19.5	-11	dB

Typical Performance ( -40,25,85°C : 500-4500 MHz)



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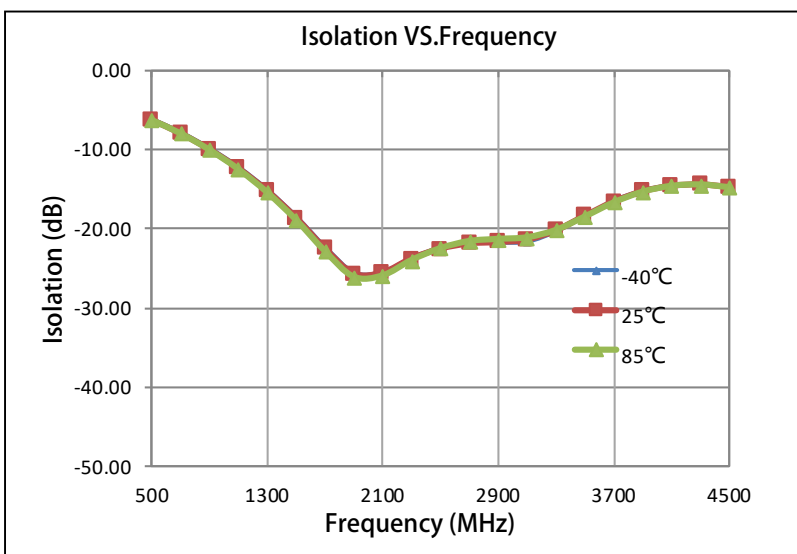
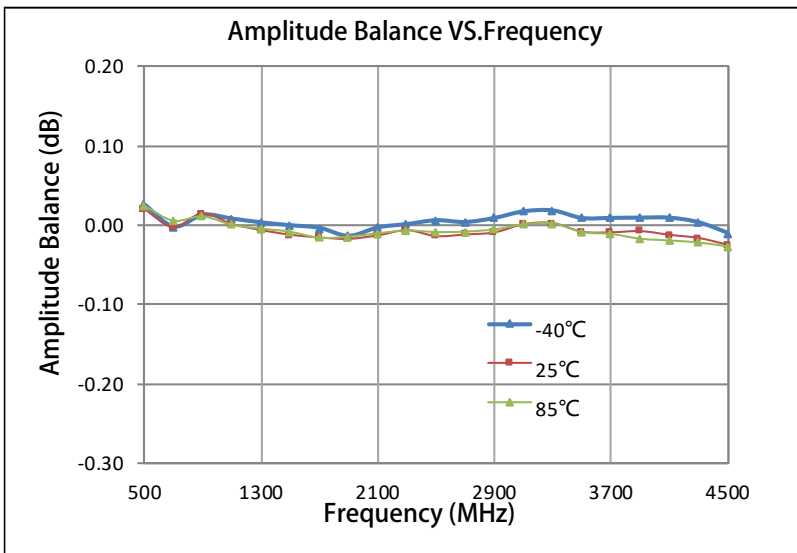
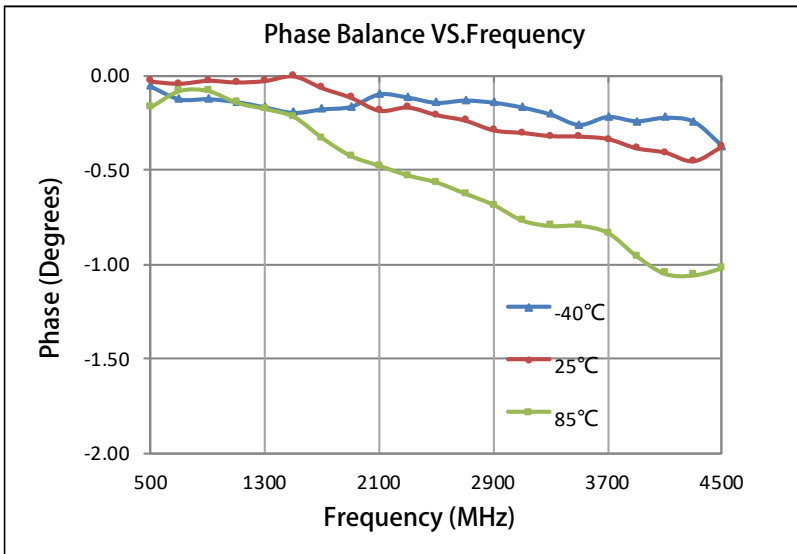
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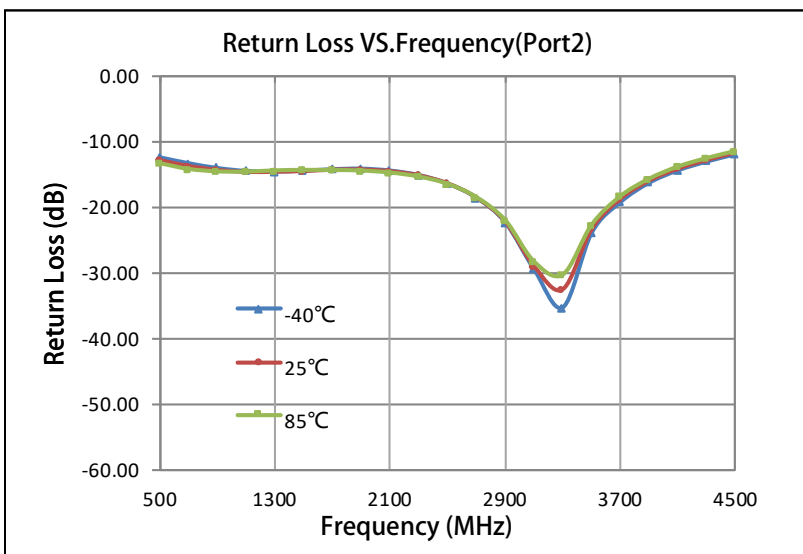
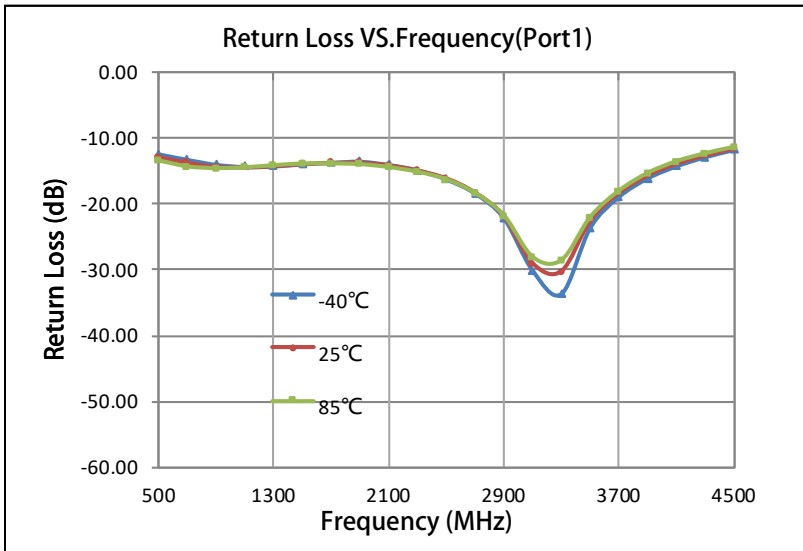
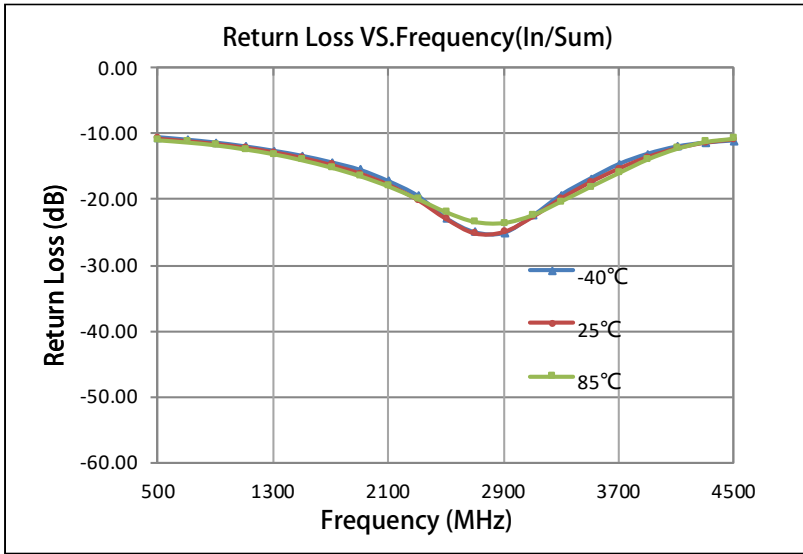
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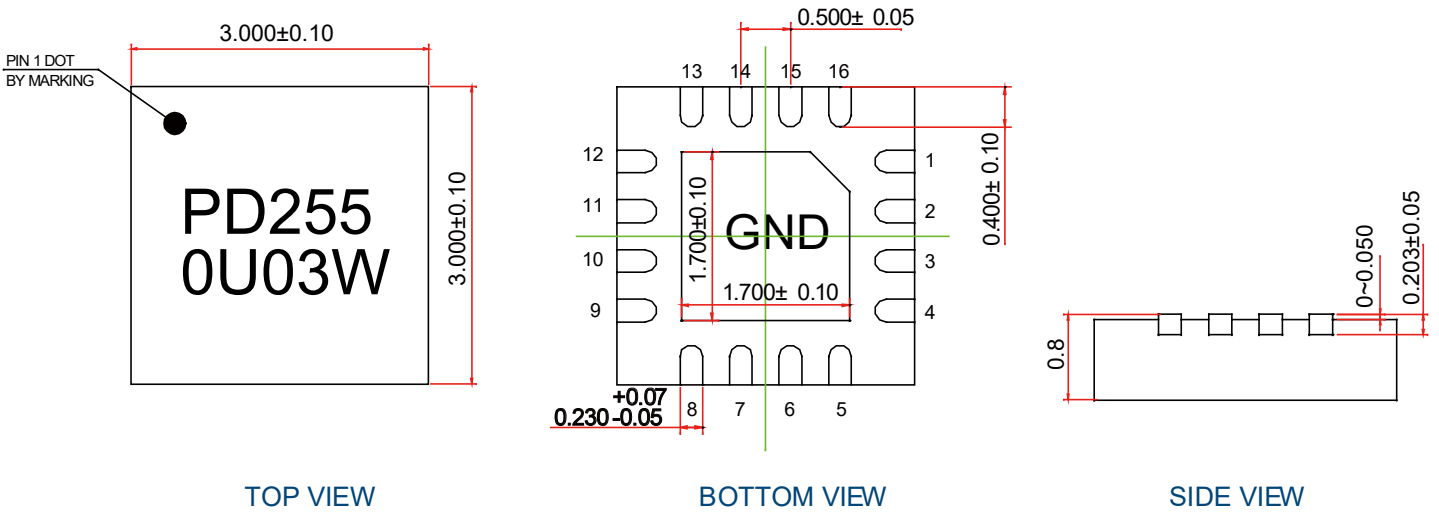
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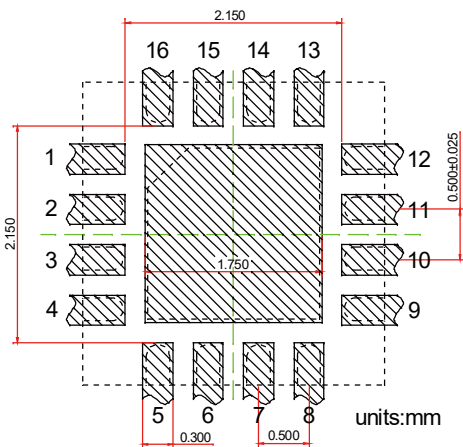
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### Outline Drawing



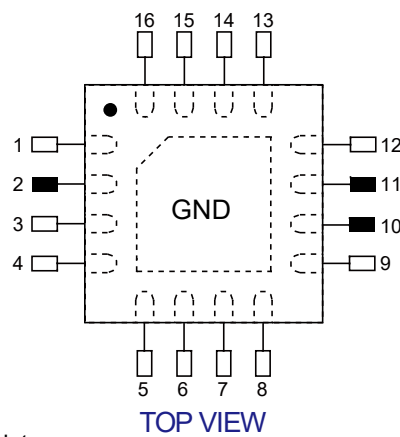
### Land Pattern



Recommended Land Pattern  
Top View

Notes: All dimensions show in millimeters

### Pin Out



TOP VIEW

#### Notes:

1. Require to add Capacitors of DC Blocker between Pins (with black color) and external circuit to prevent DC signal entry to guarantee normal work.
2. This part has passed through 100% RF test.

Pin #	Connection
1	NC
2	PORT 1 (IN/SUM)
3	NC
4	NC
5	NC
6	NC
7	NC
8	NC
9	NC
10	PORT 2
11	PORT 3
12	NC
13	NC
14	NC
15	NC
16	NC
Center Pad	GND

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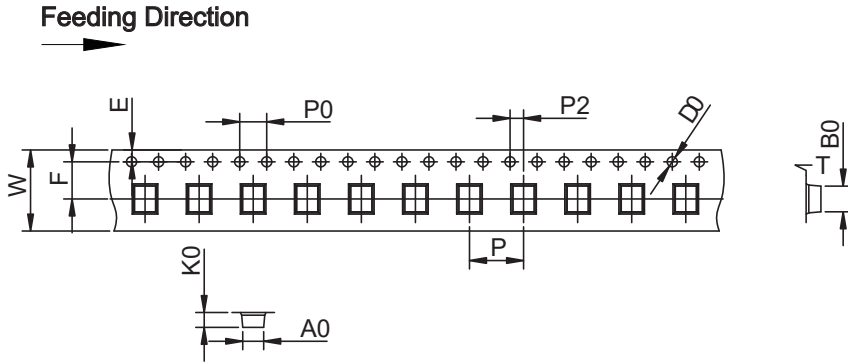
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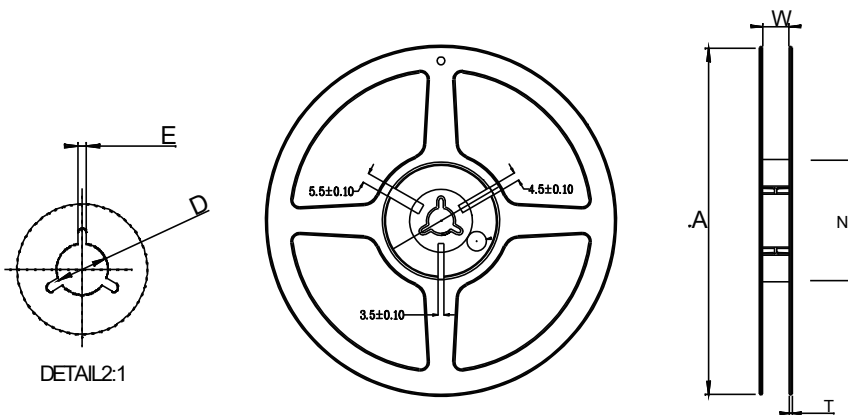
### Tape and Reel Drawing



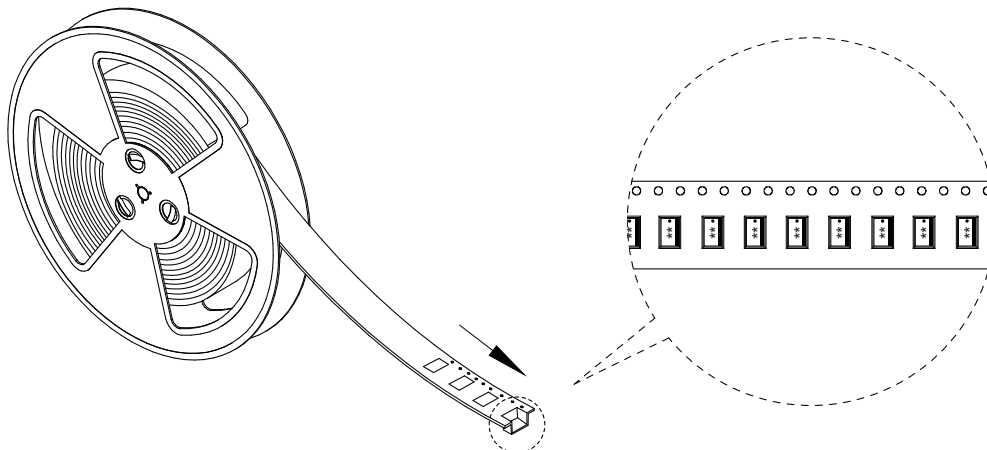
ITEM	W	A0	B0	K0	K1	P	F	E	D0	P0	P2	t	7"
DIM(mm)	12.	3.3	3.3	1.1		8.0	5.5	1.7	1.5	4.0	2.0	0.2	P/R
TOLE	+0.30 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10		+0.10 -0.10	+0.05 -0.05	+0.10 -0.10	+0.10 -0.00	+0.10 -0.10	+0.05 -0.05	+0.02 -0.02	5000pcs

Notice:

- A. 10 Sprocket hole pitch cumulative tolerance is 0.2mm.
- B. Carrier camber shall be not more than 1mm per 100mm through a length of 250mm.
- C. All dimensions meet EIA-418-B requirements.
- D. A0 & B0 measured as indicated.
- E. K0 measured from a place on the inside bottom of the pocket to top surface of carrier.
- F. Material: PE 100
- G. Thickness: 0.30±0.05mm
- H. 5000 units (maximum) / T&R



Symbol	Dimensions(mm)
W	12.4 <sup>+1.0</sup> <sub>-0.0</sub>
A	330 <sup>+1.0</sup> <sub>-1.0</sub>
N	100 <sup>+0.5</sup> <sub>-0.5</sub>
T	2.6 <sup>+1.0</sup> <sub>-0.0</sub>
E	1.9 <sup>+0.4</sup> <sub>-0.4</sub>
D	13 <sup>+0.2</sup> <sub>-0.2</sub>



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